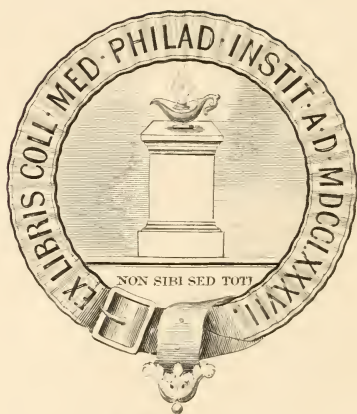


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THE
AMERICAN PRACTITIONER:

A MONTHLY JOURNAL OF
MEDICINE AND SURGERY.

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LOUISVILLE:
JOHN P. MORTON AND COMPANY,
PUBLISHERS.



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THE AMERICAN PRACTITIONER.

JANUARY, 1874.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Communications.

TOLERANCE OF DISEASE.

BY AUSTIN FLINT, M. D.,

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The use of the term *tolerance*, as applied to parts of the body separately and to the body as a whole, is not novel. The term not infrequently enters into medical writings and conversation. It has the same sense here as in other applications; it means the "power or capacity of enduring." Strictly the term implies in the subject, or in that which tolerates, consciousness and will; and there is a mental tolerance of disease, the consideration of which belongs to psychology. In the medical sense of the term the mind is only one of a number of elements. When we speak of the tolerance of disease by the body as a whole we regard the organism, which is but an aggregation of organs and functions, in the light of an entity; and when we say that such or such a part of the body shows tolerance, or otherwise, we consider this

part as having a separate individuality. It has always been the fashion in medicine to use language which implies that an immaterial principle, distinct from the mind or soul, is inherent in the body of man and in all organized bodies; a principle corresponding to the archæus of Valentine, Paracelsus, and Van Helmont. And so since the time when diseases were considered to be the work of demons, or evil spirits, it has been the custom to personify them, and to invest them with divers sentiments and passions, such as mildness and malignity, obstinacy, rebelliousness, etc. I will not stop to inquire into the reasons for so doing or to moralize thereon. Suffice it to add that this use of terms is often convenient; and at this day, inasmuch as it is understood they are used figuratively, there is little danger of the understanding being thereby imposed upon. The phrase *tolerance of disease* therefore is sufficiently sanctioned by propriety and usage.

I adopt the name *tolerance* to express an important principle in medicine. Limiting attention to the body as a whole, or the organism, I shall consider *tolerance*—the power or capacity of enduring disease—as a principle which it is convenient and useful to recognize as such, and I shall offer considerations which show its importance in relation to prognosis and therapeutics.

To illustrate this principle, let a disease be selected which in itself—that is, irrespective of complications, antecedent or intercurrent affections and accidents—may or may not prove fatal. Let the disease be acute pneumonia, sufficiently extensive to place life in more or less danger. Suppose a series of cases of this disease with the qualifications just stated; the patients of the same age and size; the conditions of general health and strength of constitution, so far as it is possible to judge, similar; the measures of treatment uniform, and no important diversity in any extrinsic circumstances: clinical observation warrants the assertion that of such a series of cases in some the disease will end in death, and in some

recovery will take place. Why is this? There is in addition to all the apparent points of similitude an agency, a factor, an element, or an unknown quantity, and this is *tolerance*. In such a series of cases there is a difference in the power or capacity of enduring; and hence while some patients succumb to the disease others triumph over it. I selected pneumonia simply because it was the disease which first came into my mind. What is true of this disease under the view just presented is equally true of other affections. Take as another example one of the essential fevers. Let it be typhus fever. Under in all respects identical circumstances, intrinsic and extrinsic, so far as we can appreciate them, one patient will die and another patient will recover, because the one has sufficient and the other not enough tolerance to pass through this disease safely.

The question at once arises in what the tolerance of disease consists; but, by way of preparing to consider this question, let us first inquire how diseases destroy life. Naturally we are led to apply this inquiry to acute and to chronic diseases separately. Certain acute diseases are fatal because they are seated in vital organs, and compromise the functions of these organs sufficiently to destroy life. Examples of this are some rare cases of acute pneumonia and pleurisy, cases of pericarditis and of meningitis when inflammatory changes or products affect the portion of the nervous center which is essential to respiration. The events which are incidental to certain cases of disease may occasion death. Examples are either submucous infiltration or exudation in laryngitis, and heart-clot in pneumonia and other affections. Exclusive of these two explanations of death from acute diseases, they kill because, to quote common expressions, "the powers of life give way," "the vital forces are exhausted," "nature can no longer hold out," etc. There was significance in the report of the cause of death in a certificate from a practitioner in this city to the board of health, some years ago, namely,

“She died because she could not live!” This, in fact, is the rationale of death in the majority of the fatal cases of acute disease. Patients die because their tolerance is inadequate to carry them through the course of disease and the processes of restoration. An acute disease which does not involve irremediable lesions of organs essential to life, and which is without incidental events compromising fatally vital functions, will end in recovery, provided what we are accustomed to call the “powers of life,” the “vital forces,” or “nature” be sufficient to withstand the disease. In other words, recovery under such circumstances is a question of tolerance. If the patient can tolerate the disease for a sufficient length of time, the ending is in recovery; if tolerance give out, the ending is in death.

Chronic diseases, when they destroy life, generally involve structural changes, which are dangerous in proportion to their seat, character, and extent. Seated in vital organs, and incapacitating these for the performance of their functions, a fatal result is the consequence of this effect. If, however, the parts affected are not immediately essential to life, and if there be no incidental events interfering with vital functions sufficiently to cause death, here, as in acute diseases, a fatal ending is due to want of tolerance. What was said of acute holds true of chronic diseases in all respects, provided the latter admit of recovery; that is, chronic diseases which do not involve incurable lesions, and which do not of necessity compromise the functions of vital organs sufficiently to cause death, will end in recovery provided there be an adequate amount of tolerance; and, on the other hand, they will sooner or later end fatally if there be a deficiency in tolerance. But suppose, what is often true, that there are incurable lesions seated either in vital organs or elsewhere; the reliance is upon tolerance for the continuance of life with such a measure of health as is possible with the existence of the lesions.

Here opens up a highly important aspect of my subject.

Every one who has had considerable clinical experience must have remarked the wonderful difference in different persons as regards the tolerance of chronic diseases. Take a disease which from its frequency affords numerous illustrations, viz., pulmonary phthisis. A patient may die with this disease after a few months, and the amount of local mischief be no greater than that which another patient will tolerate for more than a quarter of a century! Nothing can be more unreliable than the general condition of the patient; that is, the aspect, weight, muscular strength, etc., as representing the extent to which the lungs are involved in cases of phthisis. The contrast between the so-called rational symptoms and the physical signs is often surprising. This is a matter of common observation, and I need not dwell upon it. Certain cases of organic disease of the heart furnish striking illustrations of tolerance. It is truly astonishing how long and how well valvular lesions with enormous enlargement of the heart are sometimes tolerated. I might in like manner cite in illustration of this aspect of tolerance other chronic incurable diseases, including cancer, seated in any of the organs of the body.

I revert now to the question, In what does tolerance of disease consist? It is a well-known fact that acute diseases are often not so well tolerated by those who appear to have robust health as by those who seem comparatively feeble. A man in the prime of life, with strong muscles, and whose aspect is typical of vigor, may succumb to an affection which a weak old woman endures with comparative ease. Hence it is that physicians have frequent occasions to repeat the familiar adage of the twig, the oak, and the whirlwind. Now, in explanation of this fact, one of two things is to be supposed: either in the case of the apparently vigorous patient there are occult morbid conditions which render the task of tolerance greater than in the case of the comparatively weak patient, or there is less power of endurance. There

are considerations which render the latter the more probable explanation. We notice the same apparent incongruity in the ability to endure prolonged muscular exertions, exposure to cold, and other hardships in health. The experience of military life is that in trials of endurance soldiers who are slender and delicate in appearance are often the most reliable. The privations of long voyages, exploring expeditions, pioneer life, etc., are borne not infrequently as well by those who seem to have tender constitutions as by those of stronger mold; and in shipwrecks women and children have been known to survive hardened seamen. This ability to endure in health it is customary to refer to a something which is called *stamina*. In what this stamina essentially consists we can not say; our knowledge does not enable us to explain it. It is convenient to personify it, and it is therefore spoken of as if there were really such an entity. This physiological principle which we call stamina is the analogue of the pathological principle of tolerance. As we can not explain the former, so in what the latter essentially consists we can not say. This comparison goes to show that when the apparently strong succumb to diseases which the comparatively feeble are able to endure, the fact is due not to occult morbid conditions, which are greater in the strong than in the weak, but to a lesser degree of tolerance in the former than in the latter.

Admitting that in what the tolerance of disease consists is not with our present knowledge fully understood, we know somewhat of its laws and of the circumstances which on the one hand promote and on the other hand impair it. This knowledge is of great importance, and it therefore claims our consideration. The tolerance of certain diseases has laws relating to age. For example, the tolerance of typhus fever is greater between ten and twenty years of age than at other periods of life. While from ten to fifteen per cent of persons of between ten and twenty affected with this disease die, it

kills one half of those who have it after fifty years of age. Typhoid fever is best tolerated between ten and fifteen years of age, and better between five and ten than after the age of fifteen. Small-pox is tolerated badly by children and the aged. The tolerance of acute pneumonia is much less in childhood and in old age than between these extremes of life. I cite these instances as illustrations to which many more might be added. The tolerance of certain diseases has relation to sex. Women, for instance, tolerate typhus fever better than men. The tolerance of certain morbid conditions is greatly affected by habit. A striking instance of this is the ability to bear uræmic poisoning if the accumulation of urea in the blood takes place gradually. A rapid accumulation may occasion sudden coma (apoplexy) and speedy death, the patient perhaps having been conscious of no ailment up to the moment of the apoplectic seizure; whereas, if the accumulation be gradual, coma and convulsions may not take place for a long time after the manifestations of minor uræmic phenomena. It is probable that the ability to tolerate urea is acquired by habit precisely as the habitual use of narcotic drugs enables persons to take with impunity enormous doses. The exposure to the special causes of various diseases within the limits of that amount of exposure necessary for their development induces, as is well known, an ability to tolerate these causes to any extent. This is the philosophy of what is called *acclimation*. A native or one who has long resided in a yellow-fever zone without ever having had yellow fever, is protected against it by having acquired tolerance of its special cause; in other words, he has become acclimated. Tolerance of the special causes of certain diseases comes with age; thus the contagion of scarlet fever very rarely causes the disease in the middle and advanced periods of life, and after fifty years of age, as a rule, the special cause of typhoid fever is inoperative. In fact, the expression *tolerance of the causes of disease* embodies all that we know, or rather it is

an acknowledgment of our ignorance, of the rationale of the wonderful fact that certain diseases are experienced but once in a life-time. Why the eruptive fevers—typhus and typhoid and yellow fevers—leave an insusceptibility in the organism to the special causes of these diseases is, with our present knowledge, a marvelous mystery. To say that this insusceptibility is in consequence of an acquired tolerance of the special causes is, of course, only to state the fact in different terms.

The laws of the tolerance of disease which have been mentioned are alike incomprehensible and beyond our control; but there are circumstances on the one hand promoting and on the other hand impairing this tolerance which are to a certain extent both comprehensible and controllable. Knowledge of these is especially important. In acute diseases which prove fatal through lack of tolerance this is promoted by those circumstances which, it is customary to say, tend to maintain the powers of life; and first in rank among these circumstances is the ability to ingest, to digest, and to assimilate food. Favorable hygienic conditions promote tolerance; namely, pure air, proper regulation of temperature, cleanliness, etc. *Per contra*, circumstances which are the opposite of these—namely, inability to take food or to appropriate it, and unfavorable hygienic conditions—impair tolerance. Moreover, events in the course of disease which are depressing, debilitating, or perturbing tend to impair tolerance; such as mental apprehension or discouragement, hemorrhages, vomiting, diarrhea, etc.

This statement respecting acute holds true equally in chronic diseases. In the latter, as in the former, the circumstances first in importance as promoting tolerance are those which are conducive to assimilation and nutrition. Hygienic influences, mental and physical, which tend to increase constitutional strength and vigor are important; and the reverse of these, together with depressing, debilitating, and perturbing events,

impair tolerance. The dependence of tolerance on these circumstances is sufficiently evident in cases of all chronic diseases, but the fact is strikingly exemplified in certain cases of organic disease of the heart. A robust-looking man wishes an insurance on his life, and he comes before a medical examiner with a proud consciousness of perfect health. He has always been well, excepting an attack of acute articular rheumatism some fifteen or twenty years back. He is between forty and fifty years of age, and in answer to an inquiry he says that of late he has noticed some want of breath on walking fast or mounting stairs; but this he attributes to his having grown somewhat corpulent, and to his sedentary habits. The examiner notices perhaps some irregularity in the pulse, and on auscultating the præcordia he finds a loud mitral presystolic and regurgitant murmur. He finds the apex of the heart lowered to the sixth intercostal space, and situated considerably to the left of the linea mammalis. He is obliged to reject him, of course, as a candidate for life-insurance, and the man discovers that he is rejected in consequence of disease of the heart. He is astonished, or perhaps indignant; and it may be that he is to be congratulated if, contenting himself with a few expletives, he dismiss the matter from his mind, or if he conclude that his own consciousness is more trustworthy than the doctor's stethoscope.

This is a sketch of cases which are by no means infrequent. What is the sequel? This man had at the time of his application for a life-insurance a good appetite and a fine digestion. Aside from the organic affection of the heart, all the important organs of the body were sound and their functions were well performed. His habits of life were good, and his spirits were buoyant. We will suppose that some months afterward he goes into the country, in the month of July or August, for a little relaxation and rural enjoyment. He gets intermittent fever, he loses his appetite, and his blood becomes impoverished. He now suffers from want of breath on slight

exercise; soon he is unable to lie down on account of dyspnœa; his extremities became œdematous; hydroperitoneum and some hydrothorax follow. He is relieved by diuretics, digitalis, and tonic remedies. The dropsy disappears, and he resumes his avocations. He is not, however, the man he was before. He can take but little exercise, and he sleeps badly. His digestive organs do not recover their wonted functional capacity. He becomes despondent. It is not long before dropsy returns. He is obliged to sit up night after night on account of dyspnœa dependent on imperfect circulation, hydrothorax, with perhaps pulmonary œdema. Judicious measures of treatment procure only temporary relief, and he dies after weeks or months of intense suffering.

Now what is the rationale of such a history? Briefly this: he had had valvular lesions, with enlargement of the heart, for years before it happened to be discovered at the examination for a life-insurance; but the lesions had been gradually produced, and progressed slowly. He had become habituated to the comparatively little disturbance of the circulation which they occasioned, and he was conscious of no malady. In other words, under the conditions stated—namely, a good appetite, a fine digestion, and no intercurrent affection—he tolerated perfectly the cardiac lesions. The conditions of tolerance were changed when he suffered from malaria and defective alimentation. Under these changed conditions as regards tolerance he began to suffer from the effects of the obstructive and regurgitant lesions in conjunction with a weakened heart. The former power of the heart's action was never regained; but, on the contrary, with diminished appropriation of food and poor blood, the organ became progressively weaker and more yielding to the pressure from the contents of its cavities; hence dropsy, dyspnœa, and at length death from failure of the heart's action.

It would be easy to present hypothetical cases of other chronic diseases in illustration of circumstances which on the

one hand promote and on the other hand impair tolerance; but, without dwelling longer on this division of my subject, I pass to some considerations relating to the practical applications of the principle of tolerance to prognosis and therapeutics.

Every practicing physician knows that accuracy of diagnosis, although indispensable, is not alone adequate as a basis of positiveness in prognosis. Let us be ever so sure of the nature of a grave acute disease—an essential fever or an inflammation—let the diagnostic evidence be as complete as possible in regard to its degree, the extent to which parts are affected, the stage, together with a full knowledge of any existing complications; add to this an acquaintance with all that is known respecting the intrinsic tendencies of the disease, of its laws, and the results of statistical researches into its rates of mortality; there is still remaining that imponderable element which we call tolerance, on which, in individual cases, hinges the question as to death or recovery. One patient will die because he lacks a sufficient amount of that vital stamina which carries another patient safely through the disease. Hence the proverbial non-committalism of those physicians who regard as an unworthy trick an attempt to gain credit for superior acumen by means of a lucky hit at guessing. In like manner, to determine with precision the duration of life in cases of chronic diseases which must sooner or later prove fatal is beyond the bounds of scientific prescience. In addition, however, to laws and circumstances already adverted to, there are certain considerations which, as experience has taught, are to be taken into account in estimating tolerance. Habits of intemperance, for example, aside from the affections directly attributable thereto, diminish the ability to endure either acute or chronic diseases. This is also true of prolonged over-tasking of body or mind; other words, “wear and tear.” Tolerance is affected in no small degree by the mental temperament, in respect of which

different persons differ widely. A determined resolution to overcome disease often aids not inconsiderably in effecting recovery, and also promotes tolerance where recovery is impossible. On the other hand, apprehension and despondency have an opposite effect. These, with other considerations which might be added, enter into prognosis as connected with tolerance. They are considerations which bear upon prognosis in advance; that is, in the early stage of diseases. To determine the present condition as regards tolerance in cases of acute or chronic disease is more easy. By means of existing symptoms we can gauge tolerance with considerable positiveness. In acute diseases the circulation, as represented by the pulse, furnishes the symptoms which have the most significance in this aspect. In cases of acute diseases which kill from want of tolerance the mode of dying is by asthenia or exhaustion. Now, the pulse may be said to be the thermometer of the vital powers. Failure of these—that is, the giving way of tolerance—is denoted by feebleness and frequency of the pulse, assuming that these characters are not dependent on heart-lesions. Muscular prostration comes next as denoting impaired tolerance. It might be supposed that a high temperature of the body is to be considered as a sign of failing tolerance, but it seems more rational to regard this as causative rather than indicative of ebbing vital powers. In cases of chronic disease defective tolerance is shown by impairment of the forces carrying on the circulation, together with muscular debility and progressive emaciation. Skillfulness as a prognostician in cases of acute and chronic diseases depends on the ability to judge of tolerance by means of these criteria, in conjunction with the laws, circumstances, and considerations before referred to.

The application of the principle of tolerance to therapeutics is the more important of the practical aspects of the subject. In acute diseases, the danger relating chiefly to asthenia, generally tolerance is the objective point in the

management. It is an object, in the first place, to avoid measures which will be likely to impair tolerance. Conservatism in medical practice is, in other words, the protection of tolerance. In the second place, it is an object to promote tolerance. Take, by way of illustration, the potential measure, blood-letting. If the protection of tolerance be an important object, this measure is thereby contra-indicated. Assuming that it will procure relief, the ulterior effect will be hurtful in proportion to the degree of danger of dying by asthenia. If, on the other hand, whatever danger there may be is not from asthenia, blood-letting is admissible, even if it be only palliative, provided the same palliation is not obtainable by other means which do not impoverish the blood. Governed by this rule, the abstraction of blood is contra-indicated, for example, in the essential fevers, in which recovery depends on tolerance; but, in view of its promptness and potency, it may be advisable in acute laryngitis, a disease which kills by apnœa.

It is a ready method of forming a judgment concerning the propriety of employing any potential remedy or measure of treatment to propound to one's self at the bedside, in a case of acute disease, the following questions: If this disease prove fatal, will it kill by asthenia or apnœa? If by asthenia, will the remedy or measure of treatment under advisement impair tolerance? If the answer to the last question be in the affirmative, as a rule the remedy or measure will do harm. It may be sufficient in many cases of acute disease to abstain from treatment which would impair tolerance; but if there be reason to fear that the vital powers are inadequate to carry the patient safely through the disease, then the promotion of tolerance becomes an important object of treatment. The means for this end are those which constitute what is commonly called the sustaining or supporting treatment. It is a corollary of facts presented already that alimentation holds the first rank among the supporting measures. Tonic reme-

dies have a certain measure of importance as conducive to tolerance. Alcohol has its place of usefulness here. Without discussing the question whether alcohol be a food or a remedy, and divesting the topic of all moral considerations, that it is an important constituent of the supporting treatment must be admitted. Practically its usefulness as such consists in this: it promotes for a time tolerance; its use is indicated where there is evidence of failure in tolerance; it is often wise to forestall by its use the failure of tolerance; the urgency with which it is indicated is proportionate to the degree of danger from failure in tolerance. The proof of its usefulness is the evidence of increased tolerance without any of the phenomena of alcoholism or excitation. It is superfluous to add that all the favorable hygienic influences, mental or physical, which can be brought to bear upon patients affected with acute diseases tending to death by asthenia are useful by promoting tolerance. Next in importance to the measures which have reference to causative agencies, and those which are directly or specially curative, is to be ranked the protection and promotion of tolerance in the management of those acute diseases of which asthenia is the dangerous element.

In the treatment of chronic diseases how few are the known remedies which are directly or specially curative! We have some such remedies. Quinia and arsenic in malarial affections and in certain cases of neuralgia, mercury and the iodide of potassium in syphilis, the bromides in epilepsy, at once rise in the mind and bear testimony to the truth of this assertion. But it would be difficult to extend the list much. In most cases of chronic disease ending in recovery the result is not due to a direct or specially curative medication. We personify a fictitious entity when we attribute cure to nature or the *vis medicatrix naturæ*; yet it by no means follows that we are only passive spectators when our patients get well, and we can not assume to have controlled the disease by drugs. Drugs indeed often do much toward cure, although

their action be not directly or specially curative. They procure palliation or relief of suffering, and they may be indirectly of great use by promoting appetite and digestion, supplying important constituents to the blood, favoring the elimination of noxious principles, etc. Operating in these ways, they may be said, in a certain sense, to do good by affecting favorably tolerance. In so far as tolerance is favorably affected, recuperation is facilitated; and here, as in acute diseases, next in importance to curative medication (whenever this is practicable) is to be ranked the protection and promotion of tolerance.

In the treatment of those chronic diseases which are incurable tolerance is pre-eminently the objective point. If a cure is not to be effected, the ends of treatment are, first, to prolong as much as possible the duration of life; and second, to render life as comfortable as possible notwithstanding the continuance of disease. These ends are far from being trivial. Shall a patient live for a few months or for many years? is a question the answer to which may depend on the knowledge and skill of the physician. This fact is not perhaps always sufficiently appreciated in medical practice. The recognition of incurable diseases is of prime importance. Herein diagnostic ability is essential to a rational management; and a rational management consists on the one hand in the avoidance as far as may be of every thing which impairs, and on the other hand in the judicious employment of measures which promote, tolerance.

All are familiar with the following maxims of Chomel, which have become classical: The proper aim of the physician is, first, not to do harm; and second, to try to do good. The physician is not to treat diseases, but patients affected with diseases. The former of these maxims inculcates, in other words, the protection and promotion of tolerance as a fundamental rule in the practice of medicine. The latter maxim inculcates this rule with still greater emphasis. In

the treatment of patients affected with diseases, whether acute or chronic, the principle of tolerance should always pervade our thoughts and acts.

NEW YORK.

RUPTURE OF PERINÆUM—SPONTANEOUS CURE.

BY W. W. CLEAVER, M. D.

June 9, 1873, I was called to Mrs. G., twenty years of age, a short, stout, compact, fleshy woman. It was her first labor, and had been in progress twenty-four hours, a midwife having had charge of her, who had given her a fluid ounce of ergot. I found the pains feeble, the patient exhausted, and the child's head firmly impacted in a small pelvis, the face under the pubic arch, and the vertex to the right acetabulum. A stimulant was given, friction over the abdomen used to excite uterine contractions, and I applied forceps. After an hour's faithful and difficult effort I succeeded in extracting a living child, evidently arrived at full term, and having a very large head and broad shoulders. The placenta was soon delivered. Upon examination I found the perinæum completely ruptured, the rent extending through the sphincter ani and into the rectum. As it was night, and I was seven miles in the country, I gave the patient an opiate, and decided to postpone an operation until the next day.

June 10th, with Dr. Ely McClellan, whom I had invited to operate, and Drs. Hopper and Avritt, I visited my patient. We found her in excellent condition, and upon consultation it was determined to wait and make a secondary operation. An examination was made, however, proving that I was not mistaken as to the extent of the injury. The patient was placed on her back, the bladder emptied by a catheter, the

knees approximated, and opium given to prevent action of the bowels. For a few days I continued my attendance, using the catheter as required, and then left her in the sole charge of her mother. In twenty-six days she was out riding. At the end of the fifth week Dr. McClellan and I visited her for the purpose of arranging for the operation. Upon examination we were surprised to find that a *spontaneous cure* had occurred. A perfect cicatrix showed the extent of the perineal injury that had been repaired. The sphincter ani had been completely restored, and the contents of the rectum could be entirely retained. This patient takes frequent rides on horseback, and states that she is perfectly well.

Authorities differ as to immediate or secondary operation in cases of ruptured perinæum, one of the alleged objections to an immediate operation being the injurious action of the lochial discharge upon the union of the torn surfaces.

This is the first case of perineal rupture I have met with; and notwithstanding the objection just mentioned, and notwithstanding the extraordinary result accomplished by nature in the case which I have narrated, should I meet with another case I would operate at once.

LEBANON, KY.

A CASE OF IMPACTED GALL-STONE.

BY H. R. HOPKINS, M. D.

J. G. S., aged forty-eight years, of nervo-bilious temperament, active habits, always a good liver, with occasional excessive indulgence in both eating and drinking, was attacked on the morning of the 15th of October last with intense pain, referred to the lower portion of the right hypochondriac region. I saw him about 9 A. M., and diagnosed a passing

gall-stone, having seen him in several similar attacks, one five days previous. He was ordered hot applications to abdomen and extremities, and had a hypodermic injection of one half a grain of sulphate of morphia, this having given complete relief in the previous attack.

I saw him again at 1 P. M. The pain had steadily increased in intensity until it was now overwhelming; is cold, shriveled, and almost pulseless; respiration jerky, at 40 per minute, with pupils in a dark room contracted to the size of a pin's head. The pain is excruciating at all times, but with distinct paroxysm, which he can feel coming on, but which soon uses him up too much for complaints. Several times during the afternoon we thought him dying. I now sent for assistance, had him inhale chloroform, take aromatic spirits of ammonia and brandy, and continued the hot fomentations and applications. He seemed somewhat relieved from pain at 6 P. M., but suffered considerably until 4 A. M. of the 16th, when he wakened from a short sleep, saying the pain was all gone, and never complained of the peculiar pain which he thinks he is quite able to recognize from having endured it at least a score of times.

On the 16th and 17th he was greatly prostrated, with tenderness over the hepatic region, great thirst, scanty urine very dark in color, and constant vomiting of whatever has been taken; complains only of thirst and of being "so very tired."

On the morning of the 18th icterus was marked, and increased in intensity until the skin was as dark as mahogany; pulse 120 to 130; respiration 30 to 40; thirst less intense; vomiting occasionally.

During the morning of the 19th obstinate hemorrhage from the nose came on, which could not be controlled by anterior plugs of tannin, but was held in check by posterior plugs of tannin and anterior ones of persulphate of iron. Condition otherwise the same as on the 16th.

On the morning of the 20th he began vomiting partially-digested blood; attacks occur every twenty or thirty minutes, and the amount thrown off will not vary much from a pint.

The prognosis, which up to this time had been "favorable but not without danger," was now changed to "unfavorable, but not without hope." The patient, whose mind has been perfectly clear from the first, on being apprised of the gravity of his situation, gave directions as to the settlement of his affairs, partook of the holy sacrament, and expressed himself resigned to die, but still hopeful of recovery. From this time to the hour of death (3 P. M. of the 22d) there was little change, except the appearance of stupor, slight at first, but increasing so that during the forenoon of the 22d he but once or twice gave evidence of consciousness.

On post-mortem examination, forty-eight hours after death, a stone, seven sixteenths of an inch in its short diameter by one half an inch in length, was found lodged in the common choledoch duct one inch from the duodenum. The gall-bladder was empty, the liver congested generally, and several ante-mortem clots were found in its substance. The stomach was distended to nearly twice the normal size, with the mucous membrane of the pyloric end in a condition resembling ecchymosis. The heart and lungs were normal, the kidneys slightly congested.

The correct diagnosis of this case was not made when the pain ceased on the morning of the second day: it was supposed that the stone had passed. The prostration, thirst, and vomiting of the second and third days were thought due to the violence done the nervous system and to the anodyne given. The icterus was thought to proceed from occlusion of the duct from inflammation caused by the passing stone. The subsequent hemorrhages and stupor were traced to obstruction of the portal circulation and re-absorption of bile from the same occlusion.

Several thoughts were suggested by the appearance of

the stone. In shape it was nearly round, a little elongated, and bore nine distinct facets, quite smooth, which must have been formed by other stones, all of which had passed to the intestine; the last five days before the attack, and the next four years before that, from which time he could remember attacks as far back as twenty years.

The fact of all these facets being smooth suggested to my mind that the stone was not formed by aggregation; and I verified this thought by breaking the stone, it breaking into pyramidal pieces having their apexes at the center of the stone, the line of cleavage being always a radius of the sphere. Another suggestive fact was the condition of the gall-bladder, it being empty. To my mind this could only be accounted for by post-mortem transudation, but was surprised to find it so complete.

I should be pleased to hear through the American Practitioner if cases have been reported of patients living this length of time—one week—with impacted gall-stones, and if for five days of this time no complaint of pain was made. My patient took two doses of anodyne; one, referred to above, on the 15th, and one on the 18th, for general uneasiness, without absolute localized pain.

BUFFALO, N. Y.

DYSMENORRHŒA.

BY WALTER COLES, M. D.

All who have had any experience in gynecology must acknowledge that dysmenorrhœa is one of the most common and perplexing maladies with which they meet. It might be inferred, from the confident spirit in which many celebrated authors have spoken of this affection, that its pathology was

already settled, and its treatment plain and successful. But such is far from being the case, either in respect to the one or the other. The gravest errors, committed by some of our leading gynecologists, have in our judgment been connected with this subject.

We propose in this paper to offer a few reflections, based in large part upon our own observations, more especially with reference to the pathology of certain phases of the disease.

Dysmenorrhœa is our general term for a morbid condition susceptible of division into several varieties, and embracing every degree of painful menstruation, from a slight uneasiness to the most excruciating agony. One leading American author, who generally expresses himself with great clearness, divides dysmenorrhœa into five varieties—*neuralgic*, *congestive*, *inflammatory*, *obstructive*, and *membranous*. Dr. Simpson divides the disease, according to the seat of pain, under two heads—*ovarian* and *uterine*. In respect to these two divisions he remarks: "I think we must come to the conclusion that while there are some cases of dysmenorrhœa where the neuralgia is localized in the ovaries, yet that in the greater number of cases it is developed and has its peculiar seat in the uterus itself."* While entertaining the profoundest respect for the opinions of this distinguished author, we will venture to say that this observation is at variance with our own. Our experience has been—and we think others will bear us out in it—that the pain in the majority at least of the most aggravated cases of dysmenorrhœa has seemed to be rather in the ovarian than in the uterine regions. Uterine pain is generally referred either to the organ itself, or else to the lower part of the back and hypogastrium; and while such pains in a moderate degree are common in the better class of our women, they frequently do not rise to the dignity of a dysmenorrhœa; and besides, they are more or less frequently present during the interval between the periods. Throwing out of consideration these

* Clinical Lectures on Diseases of Women, p. 96.

minor cases then, and coming to those dysmenorrhœas demanding treatment, we find a large proportion of them—a majority of them—referred to the ovarian and fallopian region. The time of appearance, duration, locality, and character of the pain is a matter of importance, and should be studied closely in each individual case, as it may often aid us in forming a judgment as to the nature of the difficulty and the treatment proper to be pursued.

In respect to frequency, we believe that the different varieties of dysmenorrhœa occur in about the order in which we have named them, the most frequent being the form commonly known as (1) neuralgic, (2) then congestive, (3) inflammatory, (4) obstructive, (5) membranous. It will be seen that *obstructive* dysmenorrhœa is placed *fourth* on the list; and whatever may be said of the relative frequency of the several other forms, it must be admitted that the obstructive variety is much less common than was taught by Macintosh and Sims, and the practice of incising the os and cervix for its relief has not been generally attended with the success the latter claims for it. The practitioner who goes forth armed with a hysterotome, and expects to wage a war of extermination against this troublesome and in many instances obscure malady, is destined to frequent and sore disappointment. That constrictions both of the canal of the cervix and of the os tinæ and os internum, either congenital or acquired, or as the result of an abrupt bending or flexure of the neck on itself, do frequently exist, is true, and in such cases artificial enlargement or straightening of the canal produces the happiest results. But it not unfrequently happens that cutting operations are performed for dysmenorrhœa when no obstruction exists, and the relief obtained, if any, is but temporary and delusive, the suffering returning after a few months with all its original intensity. The temporary relief in these cases, so frequently prematurely pronounced *cured*, is doubtless due in many instances to a mistaken diagnosis, a congestive or inflammatory dysmenorrhœa.

having been temporarily alleviated by the local depletion. The fact is, it is no easy matter to determine in all cases just when stricture of the internal os exists. That the probe should meet with decided obstruction at this point is natural, and if the uterus be in position and the constriction moderate, this fact is rather a sign of health than disease, for it is well known that in certain of the chronic corporeal inflammations the normal narrowing of the os internum disappears. It frequently happens in the healthy virgin womb that though great difficulty be experienced in passing the sound, yet menstruation is normal and the person apt for impregnation. All of which goes to indicate that we should be cautious in attributing either dysmenorrhœa or sterility, when no decided stricture exists, to mechanical causes, but should seek first for other sources of trouble before operating. Happily the most frequent form of simple stricture in the nulliparous woman is at the os externum, where it can be easily detected and remedied.

When there is *flexion*, although women have menstruated without great inconvenience, and even conceived during its existence, yet such instances are extremely rare, and mechanical interference is imperatively demanded. When dysmenorrhœa is due to *retroflexion* it can frequently be relieved by a properly-adjusted pessary and judicious therapeutic means. Of late we have employed with much satisfaction the retroversion pessary of Thomas, which on some accounts we prefer to the well-known instruments of Hodge, Smith, and others. On the other hand, when obstruction is due to *antelexion* we have little faith in any of the mechanical contrivances for its relief. Anteversion pessaries are well enough in *theory*, but in our hands they have proven very unsatisfactory. The only thing to be done in the vast majority of these cases, where mechanical treatment is absolutely demanded, is to employ the knife. This affords the speediest and most satisfactory method of curing not only the dysmenorrhœa, but of relieving

the complicated train of nervous symptoms so often attendant upon this condition.

These cutting operations are not as reliable for the cure of the sterility frequently co-existing in these cases as we believe they might be if more care were bestowed not only in preparing the patient for the operation, but in the subsequent treatment. Careful after-treatment is absolutely imperative in these cases, if we would reap the full reward of the operation. For if it be neglected, not only does the woman continue sterile, but she may gradually relapse into a new and graver form of dysmenorrhœa, dependent on congestion or inflammation. These injunctions are the more important when we bear in mind the well-known tendency* of uterine flexions to produce grave inroads on the health, both physical and psychical. The uterus is also liable to be altered in structure and congested, with more or less endometritis and peri-metritis. These conditions should be relieved as far as possible by rest, etc., before operating;* and when the operation is performed it is important that the woman be kept in her bed until the cut is healed. The mode of dressing these incisions varies with different operators. The simplest and best we have tried is recommended by Skinner, of Liverpool. He passes a soft piece of muslin, three inches in diameter, on the point of a probe into the cut, leaving it firmly in position, thus preventing the possibility of hemorrhage or reunion by a wedge-shaped plug, which is not renewed until suppuration has commenced; after which a similar dressing soaked in carbolized oil or glycerine is re-applied daily until healing is complete. Such management is much more surgical than the introduction of sponge-tents and metallic dilators to preserve the patulency of the opening. This simple plug answers at once the office of a dilator and a benign dressing, under which the wound heals rapidly. When

* See the excellent paper on the "Surgery of the Cervix," by Dr. Emmet, Amer. Jour. Obstet., vol. i, p. 339.

this dressing is no longer required is quite time enough to resort to sounds and dilators to prevent contractions of the cicatrix. There is no good reason why a sore uterus should not be treated on the same common surgical and common-sense principles that dictate the management of a sore finger or a sore shin; and when it is prematurely and too much meddled with after operation harm results, which tends to keep it sore and irritated, and only aggravates any pre-existing endo- and peri-metritis, thus insuring a continuance of sterility, possibly of dysmenorrhœa, notwithstanding the patulency of the canal.

It is to be feared that these cases are often abandoned as "*cured*" prematurely; too much value being attached to the *operation itself*, without sufficient regard for the after-treatment, which should be persevered in until the womb is healthy. This local after-treatment need not be commenced, however, until the healing of the incision is complete. The practice of following the cut within a few days with iodine, nitrate of silver, etc., is much to be reprehended, and can accomplish only mischief. After the healing of the incision, and until the *next menstruation is past*, simple irrigation with warm or hot water is the most efficient means of allaying all inflammatory action and preparing the organ for such topical applications as may be requisite to complete the cure.

There appears to be a tendency of late years toward *materialism*, if we may be allowed the expression, in dealing with uterine disorders; and thus we are driven to mere mechanical expedients for the relief of fancied mechanical ills. Hence it frequently happens that the gynecologist is pained, after the performance of some operation, to find the evil he would eradicate lies deeper still, out of reach of the knife or of pessaries, in some profound perturbation of the general health. We are satisfied that the influence of the nervous system in uterine pathology generally, and especially in dysmenorrhœa, is underestimated. The uterus is in more or less sympathy

with every organ in the body. Körner and Heidenhain have shown, contrary to the statement of Kolliker, that it and its appendages are largely supplied with nerves and ganglia of the sympathetic; and it is to a better understanding of this system of nerves, its pathology and manifold sympathies, that we must eventually look for the key to many of the changes in nutrition, congestions, menorrhagias, amenorrhœas, chronic inflammations, and other painful derangements of this organ.* Even the act of menstruation itself, concerning which we know so little, when studied in its relation to the ganglionic nerves, may rise from the category of mere mechanical accidents resulting from the rupture of blood-vessels (where most physiologists are content to leave it), and assume a higher place in the scale of organic life. It always seemed to us that to call menstruation a mere *hemorrhage* was derogatory to the dignity of one of the most important bodily functions. This view has ever struck us as out of harmony with the other great and wonderful physiological laws of our being. Its punctual ebb and flow under varying circumstances, its not uncommon subordination to the influence of strong emotions, such as fright, anger, etc., and many other considerations which we will not dwell upon, all tend to indicate that physiology has by no means reached the bottom of this subject.

The late Prof. Meigs, like the large majority of modern teachers, was an earnest advocate of the hemorrhagic theory of menstruation, and as his argument is peculiarly forcible we will be excused for a few quotations. After laying down the proposition that the menstrual fluid consists "in monthly repeated uterine hemorrhage, and nothing more or less," he

* We are satisfied that we have seen several cases of amenorrhœa dependent upon a morbid nervous condition other than chlorosis; and are equally convinced that many apparently idiopathic and obscure menorrhagias, amounting in some cases to serious hemorrhage, over which ordinary modes of treatment exercise little or no control, are also due to a depressed state of the uterine nervous system.

goes on to enforce his position by saying: "It appears to me that no advocate of the doctrine of secreted menstrea will now deny that these discharges do contain a large proportion of true blood, nor that they do coagulate like blood drawn from a vein. I leave it to the student therefore to settle with his own judgment the question, how can blood-disks be the subject of secretory action? Can solids be secreted? Could not a woman as well secrete a watch or a diamond ring as one single blood-disk?"* This is Dr. Meigs's argument, and we doubt not that at the time of its delivery it passed unchallenged; but since that time the microscope in the hands of Cohnheim and others reveals the fact that blood-disks *can* effect an exit otherwise than by rupture of the blood-vessel. Under certain circumstances it is now known that both white and red corpuscles escape with facility through minute pores in the walls of the capillaries. We do not, of course, argue that precisely such migration of corpuscles as is described by Cohnheim in inflammation actually takes place in menstruation, and we only mention the phenomenon to show that the escape of blood-disks otherwise than by rupture of the vessel is not a physical impossibility, as was supposed by Dr. Meigs.

Not being able to bring the lining membrane of the uterus under the microscope in life, we are, of course, ignorant of the mode in which normal menstruation occurs. Virchow remarks† that in some of his experiments with the microscope small solutions of continuity are actually seen to occur in the sides of the capillaries and small arteries and veins, through which single blood-disks escape one by one, while the current flows on uninterruptedly within the vessels, and that after the escape of a certain amount of blood the apertures disappear. He does not specify in what tissues he observed this, but in commenting upon it Hanfield Jones remarks: "I believe that some change of this kind occurs

* Treatise on Obstetrics, p. 147.

* *Handbuch der Path.*, vol. i, p. 231.

in normal menstruation, and the relation of the process to lowering of nervous power seems to be unmistakable.”*

These remarks on the subject of menstruation may at first sight appear as a digression; but they can hardly be so considered when we bear in mind their possible—yea, probable—bearing on the pathology of dysmenorrhœa. For it is upon a proper understanding of the true physiology of every function that we must base our study of morbid action and enlightened therapeutics.

If we except mechanical dysmenorrhœa, and perhaps a goodly number of the inflammatory type, and a still smaller proportion of the congestive variety, we will still have a large majority of dysmenorrhœas traceable directly or indirectly to nervous disorder, and which can not be radically cured until appropriate remedies are addressed to the foundation of the evil. There is one form of dysmenorrhœa, embracing many of the most terrible and obstinate cases, which, although it has been doubtless embraced under the general head of “*neuralgic*,” has not received the attention of authors that it deserves. We allude to a variety in which the chief phenomenon is *spasm*. We would prefer to designate this affection *neurotic dysmenorrhœa*, as it conveys a more correct idea of its pathology and the treatment necessary for its relief. We doubtless frequently have spasmodic phenomena in the purely congestive and inflammatory forms of the disease, culminating in a condition of *chordee* of the uterus and fallopian tubes; but the real pathological basis of the symptom (for after all it is a mere symptom) which we designate as neurotic dysmenorrhœa is not necessarily local in its origin or manifestation. The dysmenorrhœal suffering is only one of many co-existent manifestations of ill health and perverted action. Persons thus afflicted are subject to various spasmodic and other neurotic affections in the intervals between their periods; sometimes more or less general, as in hysteria and catalepsy;

* Nervous Disorders, p. 272.

again we find them in the glottis, trachea, pharynx, esophagus, stomach, urethra, and occasionally in the vagina, producing vaginismus. There is more or less tendency to hyperæsthesia and irritability, so that many of the ducts and tubes of the body rebel at their normal office; and it is a fact too much lost sight of that the fallopian tubes may also take on spasmodic action. We believe in many of these cases of so-called dysmenorrhœa that pain is occasioned by spasm of these ducts, and not so much due to the act of menstruation as to its allied function, *ovulation*; the presence of the ovule in the fallopian tube exciting violent contractions in its muscular coats, as does the urine in the urethra (a common complication in these cases), food in the esophagus or stomach, a gravel in the ureter, or a stone in the gall-duct, by which we have set up an excruciating *salpingismus*. We might mention several interesting cases, which we think would demonstrate beyond a doubt the existence of fallopian spasm as the chief element of suffering in many instances. We need only recall the anatomy and physiology of these ducts to understand how this may be, and to form a well-founded suspicion that even sterility may be induced by this spasmodic detention and imprisonment of the ovule in its transit to the uterus.

In concluding an imperfect outline of what we consider the true pathology of certain forms of dysmenorrhœa, as it has presented itself to our observation and reflection, we would sum up our ideas on the subject in two propositions:

First—That mechanical dysmenorrhœa, simple and pure, comprises a comparatively small minority of the cases met with in practice.

Second—That of the remaining cases a large, perhaps the larger, proportion may be traced to other than purely local causes.

We would not be understood as arraying ourselves in any fanatical spirit against surgical treatment in uterine disease.

On the contrary, we would merely put in a plea for conservatism, and decry alike the practice of meddling surgically with every case, and that opposite and scarcely less unfortunate policy of combating mere symptoms with drugs. Having already indicated when cutting operations seem expedient, it is scarcely necessary to discuss the topical means absolutely required to relieve pain and remove congestion and inflammation. This subject is pretty well exhausted in most treatises on uterine therapeutics. Nor do we propose to consume space in the enumeration of measures suitable either for the alleviation of the paroxysm or the cure of this distressing malady; for of the former little need be said, while of the latter so much remains to be considered that it would require a paper ten times the length of this to do the subject justice. It would involve a thorough study of hygiene, electricity, nervines, tonics, alteratives, and in short every agency at our command for controlling nervous and vascular action. The general and local influence of electricity; the constitutional effects of arsenic, iron, phosphorus, and the bromides; the alkaloids, quinine, strychnine, atropine, ergotine, etc., are just beginning to attract the notice they deserve in their vaso-nervine properties, and it is to be hoped that as our knowledge of their physiological action improves our power over such obscure pathological conditions as we have under consideration may become more satisfactory and complete.

ST. LOUIS.

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TREATMENT OF DYSENTERY BY LARGE DOSES OF IPECAC.

BY THOS. M. WOODSON, M. D.

The cases I am about to report occurred between the 25th of July and the 15th of August, 1873, and were found in an area of country eight miles long by three wide. Previous to their outbreak a diarrheal tendency had been observed in the same district, which, if not a consequence of, was at least coincident with the prevalence of epidemic cholera in Nashville and Gallatin, Tenn. Agreeably to the rules laid down for the administration of ipecac in such cases, water and fluids of all kinds were denied the patient for two or three hours before and after taking the medicine.

CASE I. A child, aged three years, was attacked on the 24th of July with dysenteric symptoms. On the 25th had frequent discharges of blood and mucus, tormina, tenesmus, and severe fever with frequent quick pulse. Gave ten grains ipecac and ten drops tincture opii at one dose; vomited in one hour. Repeated the same in six hours, again followed by vomiting; the pain and dysenteric discharges promptly arrested after the second dose, patient recovering without other treatment.

CASE II. Stout male, aged forty years, father of first case; attacked August 3d with violent dysenteric symptoms, frequent actions of bloody mucus, tormina, tenesmus, fever, and general distress. Gave one half grain sulphate of morphia, followed in two hours by thirty grains ipecac. Vomited in one hour and fifteen minutes; bowels quiet for twelve hours after taking the ipecac, when dejections became copious, feculent, with no further return of dysenteric symptoms. An attack of fever supervened (of remittent form), attended with

diarrhea. Quinia and opiates soon brought about a good recovery.

CASE III. August 4th saw J. W., robust male (colored), aged thirty years; has had dysentery for thirty-six hours; discharges of bloody mucus, with tormina, tenesmus, and fever. Gave one half grain morphia, followed in two hours by thirty grains ipecac. Vomited four hours afterward. No discharge for twenty hours, and no further dysenteric symptoms or treatment.

CASE IV. A male, aged twenty-five years (colored), attacked August 7th with tormina, tenesmus, and frequent bloody mucus evacuations, fever, etc. Gave one half grain morphia; two hours after thirty grains ipecac in five-grain pills. Vomited twelve hours afterward; no discharge for twenty hours; disease arrested.

CASE V. J. H., stout, healthy female, very fleshy, aged forty-five years, attacked August 7th. Saw her on the 8th; had had upward of thirty discharges of bloody mucus, attended with tormina, tenesmus, fever, thirst, and general aching. Gave one half grain morphia, and thirty grains ipecac in five-grain pills two hours after. Vomited in fifteen minutes; had two small discharges, without blood or pain, during the following twenty hours. Gave two doses morphia, one fourth grain each, six hours apart, which completed the cure.

CASE VI. S. W., female, aged twenty-five years, eight weeks after delivery attacked with dysentery, August 9th. Saw her next day at 6 P. M. High fever; pulse 110; had seventeen discharges of bloody mucus, with great tormina, tenesmus, and general distress, in the last twelve hours. Gave one fourth grain morphia, followed in two hours by twenty grains ipecac in five-grain pills. August 11th, 6 P. M.: Vomited four hours after the ipecac; has had three discharges during the last twenty-four hours—one at 5 P. M., one at 7 A. M., and the last at noon to-day—without pain or bloody mucus; pulse 84; no fever; had one fourth grain morphia at 6 this morning,

and the same at noon. August 12th: No return of symptoms; case dismissed.

CASE VII. R. C., male, aged forty-two years, attacked August 11th with dysenteric discharges, tormina, and tenesmus; had been complaining with diarrhea, loss of appetite, and general languor since the 4th instant. Had fifteen discharges in the last twelve hours; fell exhausted upon the street, and was taken home—eight miles—in a buggy. Saw him first at 10 P. M.; pulse 96, and full; subsequently high fever, preceded by chilliness and distress of limbs. Gave one half grain of morphia, followed in two hours by thirty grains ipecac in pills; vomited in two and a half hours after taking it. August 12th, 4 P. M.: Still has fever; had four actions since midnight; one only dysenteric, the others copious, bilious, feculent, without pain. Took one fourth grain morphia at 6 o'clock this morning, and the same at noon. August 13th, 3 P. M.: Had only two actions since last note; one very copious and feculent at midnight, and at 11 A. M. small, same kind; pulse 60; no fever; free diaphoresis last night; recovered without further treatment. This, though the most violent case, was most prompt to yield.

CASE VIII. Mrs. T., aged forty-eight years, attacked Aug. 12th; had twenty discharges of blood and mucus, with tormina and tenesmus, up to 8 P. M. of the 13th, at which time took one fourth grain morphia, followed by twenty grains ipecac in pills in two hours. Vomited in five hours after. August 14th, 10 A. M.: Had no action for twelve hours; copious perspiration; pulse 65; had no fever; disease arrested; case was dismissed.

CASE IX. W. P., hearty male, aged twenty-three years, attacked August 15th with dysentery; had twenty discharges in ten hours. Gave one half grain morphia at 6 P. M., and thirty grains ipecac two hours after. No vomiting followed; no discharge for twenty-four hours; dysentery arrested. Rode on horseback thirty-five miles next day, and returned on

the 18th. There was a return of dysenteric symptoms on the 19th. Took at 6 P. M. that day one half grain morphia, followed by twenty grains ipecac at 8 P. M. August 20th: No vomiting or return of the disease.

It will be observed that vomiting followed in all the cases but one in from fifteen minutes to twelve hours. This does not accord with other observers, who gave it in large doses, and state that it seldom produced vomiting. The dysenteric discharges were promptly arrested, followed by free bilious, feculent actions, without pain, attended with general relaxation and sense of relief of the entire system, without a return of distressing symptoms. Free perspiration was noted in several cases, with marked relief.

The relaxing and evacuating effects of the remedy upon the skin and mucous membrane of the alimentary canal, directly depleting the engorged capillaries, removing irritating matters, and breaking up the chain of morbid influences, were such as to render it of great value, and restore and maintain its former reputation in dysenteric affections. The morphia, allaying pain and subduing irritation, doubtless was of great service; but that the ipecac was the principal factor I think verified by the fact that other cases during the season treated by morphia alone were more protracted.

A success so uniform as that noted in the small number of cases I have reported, though it could hardly be looked for in an epidemic of dysentery, warrants us, I think, in assigning ipecac in large doses a prominent place among the remedies for this very grave disease.

GALLATIN, TENN.

Reviews.

A Manual of Midwifery: Including the Pathology of Pregnancy and the Puerperal State. Dy DR. KARL SCHROEDER, Professor of Midwifery and Director of the Lying-in Institution of Erlangen. Translated into English from the third German edition by CHARLES CARTER, B. A., M. D., B. S., London, etc. New York: D. Appleton & Co.

American physicians are to be congratulated at having placed in their hands this admirable volume. It is indeed an excellent exposition of the present condition of obstetric science and art. One can not read it without being impressed with the fact of its being fully up with the most recent progress; but also, while not in the least failing in all needful directions for the obstetrician in ordinary cases, it meets his wants better than any work in the English language we know of in extraordinary ones. Whatever the emergency or complication presented, the practitioner finds here plain guidance. The work too is valuable for the bibliographic references given, so that the student can at once refer to many of the contributions to the literature of the special topic under consideration. Withal it is free alike from obscurity and diffuseness, and is published at such a price that any physician can afford to purchase it.

A detailed analysis of the work we can not give; but we shall present a brief extract, not only as an example of the author's style, but chiefly for the valuable practical lesson it conveys. This extract is in reference to the tampon in the hemorrhage from abortion, giving the author's method of applying it—a method from which he states he has always had the best results: "A speculum as wide as possible is introduced into the vagina, so as to get a full view of the

bleeding cervix. Then a large piece of lint is evenly placed over the external opening of the speculum, and upon it other and smaller pieces of lint are placed so as to fill up the speculum to the bottom. While the tampon is pressed against the cervix with a long rod the speculum is withdrawn. There remains then within the vagina a closely-packed tampon contained in a sac of lint of about the thickness of the speculum. If a speculum is not at hand, single pieces of lint must be pressed against the bleeding cervix. A tampon also so constructed renders good service; it is, however, more inconvenient to remove, since each piece has to be withdrawn singly from the vagina.* After the removal of the tampon it can easily be seen that it very effectually stops the hemorrhage; for only at the spot which was pressed against the cervix is a coagulum of blood formed, while the rest of the tampon is moistened by serum only. . . . Even after the application of the tampon all hope of stopping abortion need not be given up. The method of using the tampon just described by no means always increases uterine action; it occasionally happens that after its removal the hemorrhage ceases, the os uteri is again somewhat contracted, and pregnancy takes its normal course without further disturbance.”

T. P.

Laceration of the Female Perinæum and Vesico-Vaginal Fistula. By D. HAYES AGNEW, M. D., Professor of Surgery in the University of Pennsylvania. With numerous illustrations. Philadelphia: Lindsay & Blakiston.

The first part of this volume was published in the first volume of the Pennsylvania Hospital Reports, 1868; the second in successive numbers of the Philadelphia Medical and Surgical Reporter. In consequence of frequent appli-

* The difficulty suggested by the author may be obviated by having the pieces of lint tied successively, like the “bobs” of a kite, to a piece of stout twine, leaving one end of the twine quite outside of the vagina.

cations for these papers they have been united "in their present form." The professional demand thus indicated is good evidence of the value of this work, even if the name and reputation of its able author were not sufficient assurance.

Before speaking further of the way in which Dr. Agnew has performed his task, let us say that that of the publishers is excellently done; the illustrations especially are to be commended; indeed, in an artistic point of view, they are unexceptionable. There has been, however, a lamentable carelessness in proof-reading, and many proper names are most improperly spelled; thus Dr. Bozeman is frequently Boseman, and once we believe Bozerman; and shall we call it careless proof-reading or careless writing that gives us such a sentence as this, "I have never but in a single instance seen an example of this kind"?

The first part of the work is devoted to the *history* and *treatment of lacerated perinæum*. Dr. A., in discussing the prevention of the injury, after quoting various authorities as to *incisions* and as to the vexed question of *supporting the perinæum*, advocates support with the naked palm. Should the accident occur, he strongly indorses an immediate operation. The *secondary* operation is fully described and illustrations given. The author gives Baker Brown's method and his own, the latter differing from the former in using sutures secured by perforated shot instead of by "quills," and in non-division of the sphincter ani. Fourteen cases of the operation by the author are narrated. This part of the volume is terminated with a tolerably complete bibliography of the subject.

Next we have *vesico-vaginal fistula, its history and treatment*. Would it not be better to use the expression *genito-urinary fistulæ in the female* as the *species*, the different *varieties* all being completely included under this head? For example, Dr. Agnew professes to write on *vesico-vaginal fistula*, and gives *urethro-vaginal* as one of the divisions; so too *vesico-*

utero-vaginal as another; but neither of these is, strictly speaking, a vesico-vaginal fistula. So too in the use of the general term he has excluded himself from the consideration of those cases where there is a direct communication between the bladder and the uterus as the sole lesion, between one of the ureters and the uterus, or between one of the ureters and the vagina.* All these varieties ought to be considered in connection with the different varieties of vesico-vaginal fistula.

We can speak in praise of Dr. Agnew's method of operating for vesico-vaginal fistula: his success has been most satisfactory. He gives all the details of the operation, accompanied with good illustrations and a narrative of interesting cases. Nevertheless we do not believe in the use of the scalpel to denude the fistulous margins; for this purpose we much prefer scissors, and we certainly like Emmet's needle better than Agnew's. But each must select for himself; what succeeds with one may fail with another. We cordially commend the work as interesting in its perusal and as a most trustworthy guide in the operations it discusses.

In discussing the *causes* of vesico-vaginal fistula Dr. Agnew mentions *foreign substances in the bladder*, and among these *vesical calculi*. Bouchut, in the last edition of his treatise on diseases of children (Paris, 1873, p. 722), refers to a case of vesico-vaginal fistula in a child, resulting from a calculus which had inflamed the *bas-fond* of the bladder and escaped by the vagina. This case was observed in 1872 by Dr. Cazin, and Bouchut remarks that it is the only instance he has ever known. Certainly such a case is worthy of being remembered, since vesico-vaginal fistula has hitherto been regarded as confined to the adult.

Two other curious instances mentioned by Sir James Simpson are worthy of record in a treatise such as Dr. Agnew's,

* In October, 1867, we reported in the *Western Journal of Medicine* a case of this kind—the only one, we believe, ever observed in this country. A few have been published in foreign journals.

in connection with the etiology of this lesion—one where a medical student punctured with a lancet the distended bladder, thinking he was puncturing the fetal membranes; the other where an abscess formed in the vesico-vaginal wall and opened alike into the bladder and into the vagina; the case, however, was cured without treatment.

Where the author presents the *history* of the methods of treating *vesico-vaginal fistula* we believe he has fallen into several errors, some of which we shall point out.

Dr. Agnew credits Jobert (p. 74) with “a very ingenious operation devised and executed;” namely, “transplantation of tissue.” Dr. Churchill states* that it was suggested by Velpeau. Jobert performed his operation in 1835,† but Dieffenbach did a similar operation in 1830.

On page 75 Dr. Agnew describes the operation of Roonhuysen in 1663; then immediately leaves the historical order to refer to Lewzinsky in 1802, but who, like Roonhuysen, was innocent of any operation, though one would not *know* this from reading Dr. Agnew; then back to Völter‡ in 1679; to Nägele in 1812; in a little while to Le Roy (most know better as Le Roy-d’Etiolles), 1842; then to Schreger in 1817; next to Malagodi in 1829; soon to Gosset in 1834; but shortly falls back to Lewzinsky in 1802; puts Wützer (the printer has Wuther), 1841, before Dieffenbach, 1836, etc. Really it makes one dizzy to be thus hurried backward and forward through the years and the centuries. We can see no reason for such a mixed chronology.

Dr. Agnew states that “Ehrman recommended scarifying or cauterizing the edges, and then bringing them together with sutures.” But Ehrman’s method really was to bring the edges together with sutures, and then scarify or cauterize. Deyber (not Deybers, as it is given), says Dr. Agnew, “em-

*Diseases of Women, fifth edition, Dublin, page 741.

† In a paper entitled *Vaginal Fistules*, New York Medical Record, September 15, 1866, we have made reference to this same question of priority.

‡ Several of these names, by the way, are misspelled.

ployed a wooden catheter, introduced through the urethra, to control the edges of the opening while being subjected to the knife." No catheter at all; simply a solid piece of soft wood to hold under the tissue to be cut.

So too there are sins of omission that can not be overlooked. Among famous names omitted there are two that we think of just now as especially worthy of mention; viz., Metzler, who used the knee-and-chest position, and Simon, who has been one of the most successful of operators, and whose *peculiar* sutures ought to have been described.

We are given Sir James Simpson's operation, the wire splint included, without being told that Sir James in his later operations had abandoned that splint as useless. The operation of Collis is given, but the student of the subject will find that Collis was simply an imitator in 1862 of what Hayward had published in 1836 and Gerdy in 1841.

On page 105 we are shown a representation of an instrument made by Mr. Hilliard, of Glasgow, for holding the edges of large fistulæ while they are pared. This instrument seems but a slight modification of an instrument devised by Mr. Bryant, of London. We have a set of them made by Mr. Hilliard a good many years ago, which Dr. Agnew is welcome to try if he thinks there is any merit in them.

On page 104 Dr. A. describes with an illustration "a very ingenious instrument, the author of which I can not recall," etc. The inventor or "author" of this instrument was the late Dr. Banon, of Dublin, a gentleman of considerable professional eminence, who was, at the time of his decease in 1867, vice-president of the Royal College of Surgeons.

Now when the profession demand—as we hope they soon will—that Dr. Agnew shall be the inventor or author of a new edition of this work, we trust that it will be fuller on certain topics, and freer from some of the errors that, though neither numerous nor great in comparison with the merits, nevertheless are quite obvious in the edition before us.

T. P.

On the Function of the Eustachian Tube. By THOS. F. RUMBOLD, of St. Louis, Mo.

Dr. Rumbold has recently published an article, in pamphlet-form, "On the Function of the Eustachian Tube." His ideas, which are rather at variance with the teachings of authoritative otologists and physiologists, he puts in the form of six propositions, viz.:

1. That during the act of deglutition the Eustachian tube is not an open passage into the tympanum.

2. That the walls of the Eustachian tube are constantly in slight contact.

3. That the air continually permeates the Eustachian tube into the tympanum, thus maintaining the normal air in the cavity.

4. That the air in the normal tympanic cavity is not of equal density with that of the surrounding atmosphere, the air in the tympanum being rarefied.

5. That one of the functions of the Eustachian tube is the maintenance of the normal air density.

6. That the rarefied condition of the air in the tympanum is the cause of the uniform concavity of the membrana tympani, especially that portion of it from which the "light spot" is reflected.

Dr. R. cites numerous cases in confirmation of the views above given, some of which are quite conclusive. In his *résumé* he states "that, during the act of deglutition, the Eustachian tube is not an open passage into the tympanum has been sustained by the fact that the increased concavity of the membrana tympani of those patients that recover from the disability of their hearing, occasioned by patency of their Eustachian tubes, as compared with its curvature before their recovery. We have seen that after their hearing has been permanently increased the act of deglutition does not cause their membrana tympani to become less concave, as it did

before their recovery. Now as we know that they increased the concavity of their membrane by abstracting air from the middle ear, and as the closure of the tube was necessary to maintain this concavity, it is evident that if the act of deglutition opened the tube, this maintained curvature would be instantly released, allowing the membrane to become less concave; consequently give rise to the well-marked phenomena of patency, as it did in Mr. Toynbee's first case and my second."

He says further on that "it can not be admitted that the action of these muscles (*i. e.*, the tensor and levator palati muscles) allow *any* air to enter the middle ear. If this was the case, then frequent acts of deglutition would make the air-douche needless, and that the continued exercise of this faculty would increase the hearing until the one-sided pressure on the membrana tympani was neutralized and its normal position attained. Nor would it be correct to assert that their middle ears did not receive any air, as this would cause them to be as deaf as cases afflicted with acute tubal catarrh."

Dr. R. seems to forget that the beneficial effects derived from the use of Politzer's apparatus do not only consist in forcing air into the tube and middle ear, but that the pressure exerted on the ossicula auditus and membrana tympani is also a cause of the improvement in hearing. We would like to ask whether in catarrhal affections the tube is quite permeable, and whether its muscles can then act physiologically?

The second proposition is and has been the subject of much discussion. Rudinger, in his able article on the Eustachian tube published in Stricker's Manual of Histology, has been unable to determine the question with absolute certainty, but thinks that it is constantly open, owing to the presence of a capillary slit found in its upper part.

The third proposition is ably put and undoubtedly true, nor are we disposed to doubt the correctness of the fourth proposition.

We are not convinced, however, of the truth of the sixth proposition by the argument employed by Dr. R., that patients suffering from an abnormally open Eustachian tube could restore the concavity of their membrana tympani by resorting to a forced inspiration, or by means of swallowing with compressed nostrils.

Dr. R. appears to think that the air contained in the middle ear is the only factor concerned in the concavity of the membrane, and especially that portion from which the "light spot" is reflected. We think that the elasticity of the membrane, the inclination of it to the external auditory canal, the traction of the malleus and the muscles of the middle ear, and the polish and brilliancy of the membrane are also of some import.

As a whole, the author is deserving of praise, for he does not hesitate to express his disbelief in some of the expressed theories on the functions of the Eustachian tube. We must leave it to more exact observers to determine who is correct.

R. C. B.

An Investigation concerning the Mechanism of the Ossicles of Hearing and the Membrane of the Round Window. By CHAS. H. BURNETT, M. D., of Philadelphia.

This very interesting pamphlet is based on experiments made in the Physiological Institute of the Berlin University under the eye of Prof. Helmholtz, and the reviewer can bear testimony both to the assiduity and ingenuity of Dr. B., having had the pleasure of that gentleman's acquaintance during his sojourn in Berlin. The deductions drawn from Dr. Burnett's elaborate experiments are:

1. The excursions of the chain of ossicles of hearing bear a fixed relation to each other.
2. The excursions of the ossicles of hearing are communicated through the labyrinthine fluid to the membrane of the round window.

3. The excursion of the membrane of the round window generally equals that of the stapes; but it may equal that of the membrana tympani at the point of the manubrium mallei.

4. The pressure within the labyrinth, increase beyond certain limits, causes cessation of the action of the membrane of the round window and the chain of ossicles of hearing. This occurs sooner in connection with high notes than with the lower notes of the scale.

5. If the labyrinthine pressure is greatly diminished or totally removed, the chain of ossicles may continue to vibrate, but they exert no influence upon the membrane of the round window.

The ideas expressed in these deductions are correct in the main, Prof. Helmholtz having indicated their truth in his exhaustive treatise on the mechanism of the ossicles of the ear and the membrana tympani, published in Pflüger's Archive for 1869.

R. C. B.

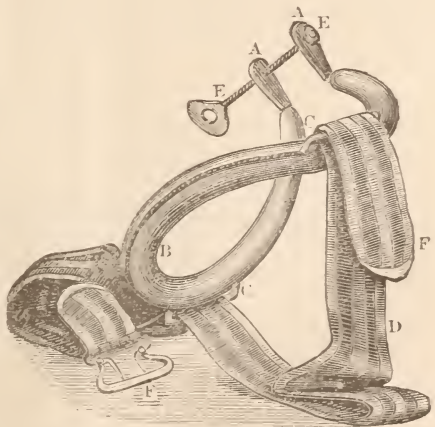
Evidences of Life in the Newly-delivered Child. By WM. B. ATKINSON, M. D., etc. Philadelphia.

Dr. Atkinson's brief monograph had its origin in his having recently been asked as to the fact of a child having life at delivery, in a case involving a large estate, and his thereby being "led to investigate the subject and collate the views and opinions of authorities on this delicate and important point." His conclusion after the investigation and collation is this: "We are firmly of the opinion that a large number—perhaps even a majority—of those reported among the still-births were living, even breathing, for an appreciable interval after their complete separation from the mother."

Clinic of the Month.

O'REILLY'S PATELLA SPLINT.—In answer to several inquiries concerning patella “braces” or “splints,” we give below a description of an instrument devised, in 1871, by Dr. P. S. O'Reilly, of St. Louis, Mo., which has been successfully used both by its inventor and other surgeons in fractures of the patella.

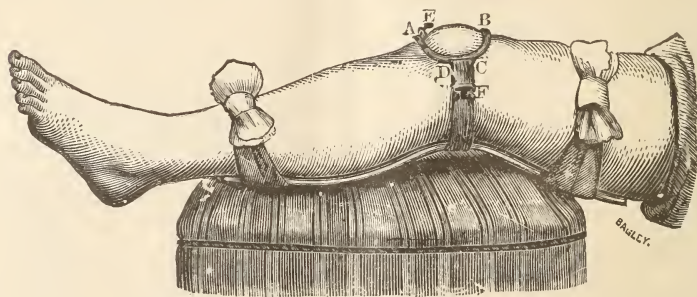
The splint consists of a piece of rounded, tempered steel, oval or horse-shoe shape, with the ends turned in and bent upward. The sides are depressed so that the part corresponding with the toe (B) of the shoe is curved upward to the extent of about half an inch, allowing it (the toe) to ride over and upon the ligaments of the rectus muscle, while the sides dip downward and embrace the bone; and at the same time the splint, by pressure at the insertion of the vasti muscles, counteracts the action of the latter; and nevertheless does not by undue pressure upon the tendon of the rectus muscle cause the fragment to tilt up at the point of fracture, as necessarily results when



Dr P. S. O'Reilly's Patella Splint

the pressure is made on this tendon alone, as in the use of the simple ring. On the sides, slightly anterior to a line through the center of the oval or horse-shoe part, are fixed

ears or loops (C) for the reception of the band (D), by which the shoe portion of the splint is held in position. Through the turned-up end of that portion corresponding with the heel or calk (A) of the horse-shoe is a thumb-screw (E), by which the splint is compressed or expanded as may be required. The splint being covered with chamois or soft felt, and a strap of silk or linen webbing (D) or smooth leather, with a buckle (F) on one end, the free end of the strap is made to pass through one of the ears, rendering it complete for application. The injured limb being laid upon one of Day's curved posterior splints, well padded, and a little wider than the leg, secured at each end by a handkerchief or roller bandage, the fragments being then brought into position, the patella splint is placed over and made to encircle them. The strap (D) is carried under the leg and around Day's splint, and run through the opposite loop or ear, and returned upon itself and buckled (F) sufficiently tight to keep the splint in position, but not so much so as to inconvenience the patient more than is necessary. The thumb-screw (E) may now be used either to tighten or relax the splint.



Dr. P. S. O'Reilly's Patella Splint applied.

In dislocation of the patella upward, in the rupture of the ligamentum patellæ from the tuberosity of the tibia, by an elastic strap attached to the ears or loops and passed under the sole of the foot may be secured the most perfect approximation of the parts. The ears or loops should be of hard

steel and extend a quarter of an inch from the body of the splint, so as to keep the strap well out from the leg, avoiding pressure, constriction, etc.

TREATMENT OF ACUTE PNEUMONIA. — Lebert states (*Ber. Klin. Woch.*), as the result of his own observation, that venesection and tartar-emetic moderate the febrile condition by diminishing the lateral pressure in the vascular system, tartar-emetic possessing the advantage of not depriving the system of blood. On the other hand, neither of them has any power to cut short pneumonia or to interfere with its development, and are not to be regarded as direct antipyretics. The usually short duration of the febrile symptoms in pneumonia, the remissions which occur in its course, and the rapid fall of temperature about the end of the first week, all have a tendency to induce physicians to form exaggerated estimates of the value of therapeutic measures. By no method of treatment can the critical period be hastened by an hour.

With regard to digitalis, Lebert adopts Traube's view, that the distinct lowering of the pulse and temperature brought about by its administration is owing to its power of slowing the circulation through its influence on the vagus. He points out the risks of formidable depression which are incurred by its use in large doses. In moderate doses it gives some relief to the fever and dyspnoea. Veratria is found not to give better results than those obtained by the expectant treatment. Quinia is the best antipyretic, and can be given in full doses with much less risk of toxic effects than digitalis or veratrum. It produces, when given to the extent of thirty grains in the twenty-four hours, a sedative effect. The temperature is lowered and the pulse diminished in frequency; but, as had already been pointed out by Vogt, the pulmonary affection undergoes no diminution, and the diminution of the temperature is light and transitory. In the form of pneumonia occurring in alcoholism and in typhoid pneumonia

a tranquilizing effect was produced on the nervous system by its administration.

Cold baths have not been tried by Lebert in a sufficient number of cases to enable him to speak definitely regarding their value. He found them powerful agents in diminishing fever, observed that they were well borne in the disease, and that even in cases of lung inflammation in connection with alcoholism rest was obtained by the patient under their influence. He regards them as powerful means of alleviating severe cases, but as not applicable in cases of pneumonia generally.

Nitrate of potash has in Lebert's hands produced such inconsiderable results that he has altogether ceased to employ it for some time, the more especially since it occasionally was found to produce unpleasant gastric symptoms. Acetate of lead and chloroform inhalations have not been found to possess any real therapeutic value. Brandy does good service in the disease when occurring in drunkards, but otherwise is not of general utility.

After a complete and searching critical examination of these different methods, Lebert proceeds to lay down the bases of the rational therapeutics of the disease. The patient ought to remain in bed, in a condition of quiet, with moderate warmth, and perspiration ought not to be encouraged. He ought to speak as little as possible, and drink neither too cold nor too hot fluids. In very weak patients ether or small quantities of wine may be given with advantage. When the fever abates, seltzer water with milk may be given; and if the appetite is bad, bitters may be prescribed. In the absence of any definite indication it is better not to administer any medicine.

Indications for venesection are—pulse full and hard, or small and resisting, with marked dyspnœa, and a cyanotic condition of the patient, all of which point to great embarrassment of the pulmonary circulation. If there be rapid

spread of the inflammation, marked cerebral symptoms, and distension of the jugular veins, blood-letting is imperatively necessary. But this expedient is absolutely contra-indicated in secondary pneumonia, in the typhoid form, in that arising in drunkards, and in epidemic or malarious forms of the disease.

When dyspnoea depends not on congestion of the lungs, but on excitability of the nerves, opium or quinia are to be administered. If opium check expectoration, then quinia is to be substituted, especially when disproportionately high fever and tendency to typhoid symptoms exist. If an anti-pyretic effect is not produced by the use of the quinia, then cold baths may be tried, especially in the typhoid and alcoholic forms of the disease. If local pain be considerable, cold applications may be made to the chest, or small doses of opium or Dover's powder may be exhibited. If the expectoration be not ejected, tartar-emetic or ipecacuanha are to be administered; in tendency to collapse, ammonia, camphor, or benzoic acid may be prescribed; in profound nervous depression, stimulants and musk. He recommends four parts of musk with two parts of carbonate of ammonia in sixty parts of rectified spirit and twenty parts of distilled water, with four drops of oil of peppermint. During convalescence no medicines are commonly required, and all that is necessary is to caution the patient against premature exertion and to prescribe a proper dietary.

Jürgensen (*Volkmann's Samm. Klin. Vor.*, No. 45) believes that the great danger to the patient in pneumonia is from insufficiency of the heart. This depends on the increased resistance in the pulmonary circulation, on the infiltration of the lung, which lessens its power of assisting in the general circulation, and on the diminished superficies available for respiration, all of which lead to increased demands on the functional activity of the heart. On the other hand, the elevation of temperature which occurs in the disease increases

the frequency of the pulse at the very time that the muscular structure of the heart is weakened. The pulse accordingly is the great guide to the treatment of the disease, just as in fever the axiom "*sine thermometro nulla therapia*" holds good; so in pneumonia "*sine pulsu nulla therapia*" is an important maxim. The most efficient method of preventing the enfeeblement of the heart consists, according to Jürgensen, in the withdrawal of heat from the body by cold baths as often as the temperature reaches 104° . The duration of the bath ought to be from seven to twenty-five minutes, and with the old and weak tepid water may be used. Before the use of the bath a stimulant ought always to be administered on account of the increased effort which the bath entails on the heart for the time being.

In addition to the lowering of the temperature by the bath, Jürgensen recommends the administration of quinia in doses amounting to thirty grains, dissolved in water by the aid of acid. This quantity is to be administered every second evening between six and eight o'clock. There is no danger in even doubling this dose. He gives a nutritious diet, with a moderate amount of wine. Pain in the side and sleeplessness he treats by subcutaneous injections of morphia; restlessness and delirium by chloral.

If in spite of the treatment cardiac weakness supervene, he gives stimulants freely; strong wines, champagne, spirits, camphor, or musk. During recovery he gives reduced iron and bark; and if absorption of the inflammatory products be delayed, he strongly recommends oil of turpentine, which is to be administered in doses of twelve drops, either in milk or in capsules, six times daily. By this method Jürgensen has lost only twenty-four patients out of two hundred who suffered from the disease. (Dublin Journal of Medicine.)

TREATMENT OF CATARRHAL JAUNDICE BY FARADIZATION OF THE GALL-BLADDER.—Gerhardt has found the treatment

of jaundice from catarrh of the ducts by faradization of the gall-bladder successful in a number of instances, and thinks it is analogous to the reduction of a hernia by the taxis. The position of the distended gall-bladder can be made out by the touch. It is even sometimes visible, and percussion along the lower margin of the liver enables us to identify its position with ease. An electrode of a strong induction apparatus is placed on the organ and firmly pressed upon it in the direction of the posterior wall of the abdomen. The second electrode is suddenly applied to the opposite point of the posterior wall of the abdomen. This process is repeated in rapid succession. Occasionally the gall-bladder becomes immediately apparently less, and bile will frequently re-appear in the stools within two days. It has been noticed that the renal nerves become stimulated by this application, and that during the succeeding days urine of a paler color and lower specific gravity is voided. Sometimes it is necessary to repeat the application of the galvanism in consequence of the dullness corresponding to the distended gall-bladder becoming again recognizable. (*Ibid.*)

REPLANTATION OF TEETH.—Replantation of teeth for acute and chronic periodontitis was suggested by Mr. Coleman after seeing the same remedy succeed for acute inflammation of the pulp of a lower molar tooth, which had resisted every known kind of treatment. The principal objection urged against replantation of teeth is that if a tooth is extracted it must necessarily lose its vitality, and therefore the fangs undergo absorption, so that after a time it becomes useless and must be extracted. Supposing the objection to be valid, as absorption is a long process, sometimes extending over years, it will have been a greater gain for a patient to retain his tooth for an indefinite period than to lose it entirely and at once; but it is no more necessary that a tooth, after undergoing extraction and replantation, should lose its vitality than

for a long bone to do so after fracture, with stripping back of the periosteum.

The manner of performing the operation is as follows: A tooth which is to be replanted should be carefully extracted, and as little as possible of the surrounding tissues lacerated. It should then, unless the operation be simply for the destruction of the dental pulp, and where the periosteum is healthy, be immersed in some antiseptic fluid, such as diluted carbolic acid or chloride of zinc (the latter from experience being preferred.) The socket should then be swabbed out some half dozen times with a strong solution of the same antiseptic employed. The tooth, if carious, should be plugged and returned to its place. If there is any thickening of periosteum, fibrous growth, sac of abscess, or absorption at extremity of fang, it should be excised before replantation. Should the patient complain of pain arising from the operation, prescribe poppy fomentations, although the pain is rarely more than what is due to the tenderness of parts from laceration of soft tissues after the extraction of the tooth.

Out of twelve cases that Mr. Coleman has operated on within the last four years, nine are successful and three have failed. The failures have but one significance, and that is, teeth to undergo replantation must be selected. In a cachectic patient the chances are against success; when a tooth has lost the support of its fellows on both sides it can not become firm. Nevertheless the successful cases warrant a further trial of replantation, which would preserve many teeth otherwise sacrificed. (Lancet.)

MINT FOR THE SUPPRESSION OF THE MILK.—Dr. Dasara observes that the knowledge of the antilactiferous properties of mint appears to have been possessed in very ancient times, since Dioscorides mentions the fact in his works, and subsequent writers have only confirmed his statement. Linnæus observed that cows that ate mint in their pastures yielded a very

serous milk, and Laewis affirmed that the coagulation of milk in which some leaves of mint were placed was retarded. More recently M. Desbois de Rochefort, experimenting on mint, found that fomentations of mint applied to the breast, and the infusion taken internally, were capable of suppressing the lacteal secretion, and of preventing the usual accidents attending milk fever in puerperal women. Trousseau expressed some doubt respecting this action of mint in his Treatise on Materia Medica; but Dr. Pasquale Pepre, in a note on Trousseau's observation, remarks that the fresh leaves of mint placed in the axilla are commonly used in Naples to suppress the milk. Dr. Dasara determined to experiment for himself, and gives the details of a series of cases in which he tried the effects of the application of mint poultices made from the young sprigs at various periods of lactation, and the following are the conclusions at which he has arrived: 1. It is an established fact that mint has the power of suppressing the lacteal secretion; 2. The suppression of the secretion takes place at whatever period of lactation the mint is employed; 3. The effect takes place in a very short space of time, according to his experiments in from three to five days; 4. The suppressive action of mint can be localized to one breast; 5. No danger nor even any inconvenience arises either to the mother or child either from the use of the mint or from the suppression of the secretion. Signor Dasara nowhere states in his paper the species of mint he employed. The omission is to be regretted. (*Rivista Teorico Practica.*)

ON CLEFT PALATE.—T. P. Pick, Esq., records (St. George's Hospital Reports) eleven cases of this defect, with an account of the operation in each. In connection with the subject of hemorrhage, Mr. Pick says a free amount of bleeding during the operation is rather a favorable symptom than otherwise; that in those cases where the bleeding is free union will be found much more perfect than where the parts are anæmic

and bleed more slightly. The hemorrhage, he adds, is rarely so excessive as to produce any serious effect either on the union of the wound or the health of the patient. Mr. P. does not favor the early operation, but believes it advisable to delay cutting as long as possible; *i. e.*, "as long as there is no fear of the child's acquiring defective articulation." Silk sutures were used for the soft palate and silver for the hard, Mr. P. thinking the former more manageable than any other, more easily introduced, more readily secured, and much less likely to slip. He uses a perfectly pure silk, plaited instead of the ordinary twist. He allows the sutures to remain for eight days, and except in a single instance, when one of them produced a little irritation, has found no inconvenience from them. The after-treatment consists in giving as much *fluid* nourishment as the patient will take, with a fair allowance of wine, Mr. P. believing that to obtain good union it is of the first importance to keep up the patient's strength.

Notes and Queries.

HEMATEMESIS TREATED BY MONSEL'S SOLUTION.—Three years ago Dr. L. J. Woollen, of Vevay, Indiana, reported for "Notes and Queries" a case of hematemesis relieved by persulphate of iron solution. He now writes that, having had the good fortune since that time to treat several other cases of the affection with the iron, he feels "almost warranted in saying that to arrest hematemesis Monsel's solution is *the* remedy." He adds:

"At first I was in doubt with regard to the size of the dose, the only guide I had being the statement of Ellis, of Philadelphia, that four minims might be given if largely diluted with water. I was fearful that the medicine might prove irritating to the stomach, and hence was at first a little nervous about enlarging upon the four-minim dose. Repeated trials, however, have convinced me that the solution, if properly diluted, does not irritate or derange the stomach—not even as much as the common muriated tincture of iron—and that it may, if necessary, be given in doses of say forty drops mixed with a third of a tumbler of water every two or three hours. In ordinary cases it is not necessary to give more than from ten to fifteen drops diluted with a wine-glassful of water; but if the hemorrhage is persistent and alarming, the dose should be increased until the desired effect is produced.

"Nor is it alone in hematemesis that the good effects of Monsel's solution are apparent. I know no drug which is its equal in some cases of chronic diarrhea. For instance, when chronic diarrhea manifests itself in a patient with impoverished blood, or who has been the subject of malarial disease, the

iron will seldom fail to be of great advantage. In amenorrhœa associated with an anæmic condition of the blood I have found no single remedy equal to Monsel's solution in doses of ten drops three times a day. I have not used the persulphate of iron in hemoptysis, but believe that when reduced to an impalpable powder and used by insufflation, or the solution in atomization, it would often succeed in arresting the bleeding. Dr. Wetherby, of New York, reports a case thus treated with success in the *American Journal of Medical Sciences* for July, 1866.

ANOTHER HEMOSTATIC.—Dr. A. Given, of this city, writes us that in pulmonary hemorrhage he has found no agent equal to the witch-hazel (*Hamamelis Virginica*). He gives it in the form of fluid extract (Tilden's), though he says a strong decoction is almost equally efficacious. It seems speedy and safe in its action, though it is so powerful an astringent that laxatives are demanded if it be given for any length of time. Dr. G. mentions among others the following cases, which will serve to illustrate the mode of using and behavior of the drug:

"*Case 1.* A patient with alarming hemoptysis, to which he had been subject, took a tea-spoonful of the fluid extract of *ham. virg.* In less than ten minutes the hemorrhage diminished and soon ceased. The medicine was taken three times a day for a fortnight. Some weeks after the patient died from hemoptysis before aid could reach him.

"*Case 2.* A young lady, aged eighteen, spit blood every two weeks during a period of two years. In a more than ordinarily severe attack the hemorrhage was quickly arrested by a dose or two of the witch-hazel. The medicine was then administered first three times a day, then once a day for several months; since which time, now two years ago, she has had no trouble.

"*Case 3.* A maiden lady, the subject for several years of hemoptysis, took in one of her seizures opium, lead, turpen-

tine, and some other remedies without avail. The bleeding continued throughout the night, and was more profuse on the following day. I now administered the witch-hazel in doses of a tea-spoonful every twenty minutes. The hemorrhage ceased after the third dose."

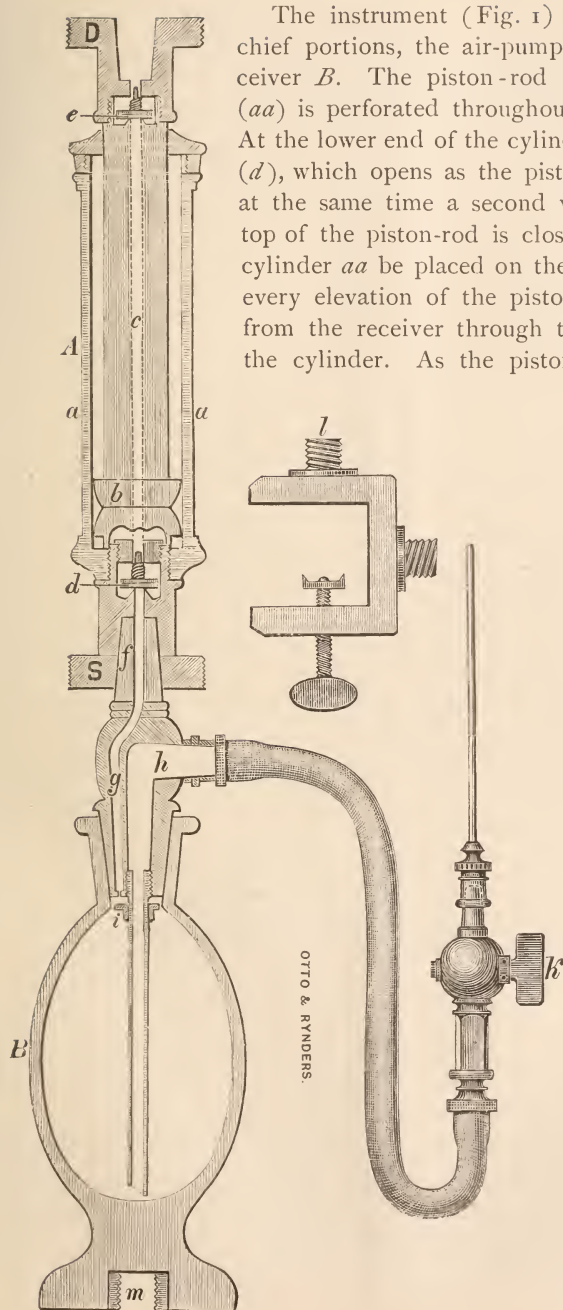
EMPHYEMA—PARACENTESIS THORACIS—RECOVERY.—M. H. Alderson, M. D., of Bath, Ky., communicates this case: "Philo Howe, twenty-seven years of age, and of rather delicate constitution, was attacked February 25th with right pleuropneumonia. Convalescence was established in two weeks, and I did not see him again until the 1st of April, when I found him suffering with great distension of the right pleural cavity; the right side of the chest was œdematous, as well as the feet and legs. Hydragogues and diuretics were administered without benefit; and as the oppression in breathing was so great, on the 30th of April, assisted by Dr. Shaw, of Bath, I performed paracentesis, giving exit to six pints of pus. Tonics and stimulants were directed. On the 5th and also on the 16th of May the tapping was repeated, the discharge each time being as great as at the first. The last time before withdrawing the canula I introduced a rubber catheter through it; then withdrew the canula, bent the external portion and fastened it by adhesive plaster to the chest, and thus secured a continuous drainage for the fluid of the cavity. The discharge, varying in quantity from a few ounces to a pint daily, continued until June 20th, when, as it was scanty and entirely serous, I withdrew the catheter, and the aperture soon closed. Since then the man has been able to work as a farm-hand, and seems entirely well."

REMEDY FOR CHRONIC HOARSENESS.—An eminent physician of Philadelphia contributes the following: In chronic hoarseness arising from thickening of the vocal chords and adjacent membrane the ammoniated tincture of guaiacum is often a very

efficacious remedy. It may be appropriately mixed with equal parts of the syrup of senega, and a tea-spoonful of the mixture given two or three times a day.

THE TRUE CREED.—“In the present day it has become too much the fashion to decry the powers of remedies when their influence is obscure or their mode of action unintelligible. To a certain extent my sympathies go with the movement, because I have long felt that the evidence on which the rules of practice are based is extremely defective. In some instances a theory is propounded which has never been brought to the test of a logical proof; in other cases the merest empiricism guides our treatment, having no basis either of pathological or physiological causation to justify its adoption; more than all, the enumeration of a certain number of successful cases is supposed to be sufficient proof of the advantage of a certain method of treatment, when they neither satisfy the numerical nor the inductive method of arriving at truth. At the same time I do hold to the belief that medicine rightly used has a power to counteract the events and processes of disease, and it should be the aim of every physician to ascertain, so far as he can, what powers medicinal agents possess of this kind, and what processes are injurious and may be counteracted with benefit to the patient.” (Dr. Barclay.)

NEW INSTRUMENT FOR ASPIRATION AND INJECTION.—We are indebted to Otto & Rynders, of New York, for the following brief description and illustrations of an instrument which its inventor, Joseph Leiter, of Vienna, claims will fulfill the following uses: transfusion; removal of secretions and exudations from the larynx; removing the contents of the stomach, or placing food in it; evacuating the bladder; for enemata; injecting preparations, or for embalming; producing local anæsthesia; removing milk from the breast, or for cupping.



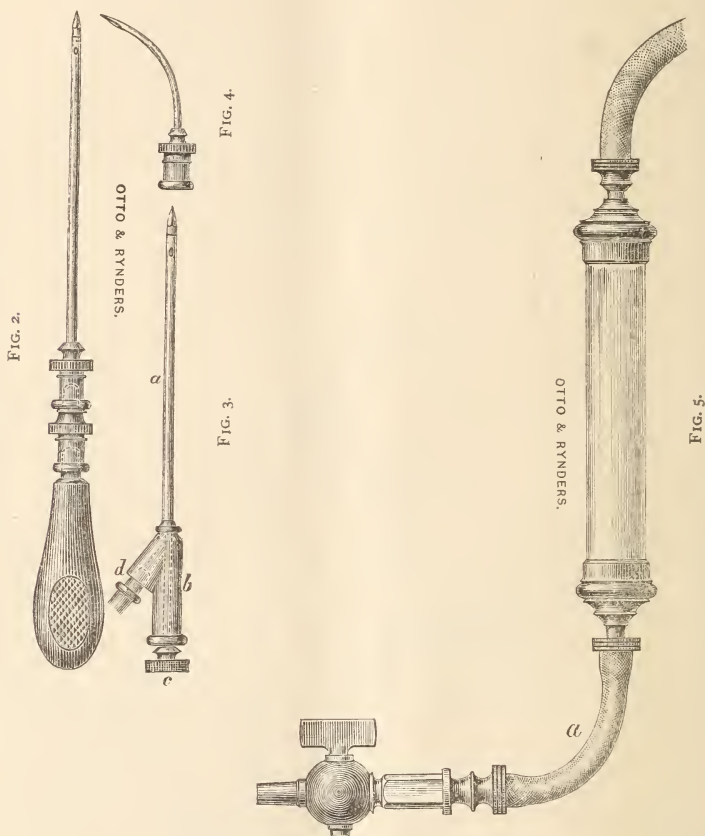
The instrument (Fig. 1) consists of two chief portions, the air-pump *A* and the receiver *B*. The piston-rod in the cylinder (*aa*) is perforated throughout its length (*c*). At the lower end of the cylinder *aa* is a valve (*d*), which opens as the piston is drawn up, at the same time a second valve (*e*) at the top of the piston-rod is closed. If now the cylinder *aa* be placed on the receptacle at *f*, every elevation of the piston draws the air from the receiver through the canal *g* into the cylinder. As the piston is pushed in,

the air passes out through the canal *c*; so that continued working of the piston may greatly rarefy the air in the receiver.

To pump air into the receiver, the piston-rod must be attached to the top of the receiver, and the cylinder must be moved so the valves work in the opposite direction, the air drawn in through *d* being driven in through *e*, and its escape prevented. To prevent mistakes in applying the pump to the receiver, one end

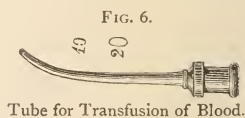
is marked Saug-V. (suction valve), the other Druck-V. (pressure valve).

For sucking in fluids, forcing them out, or employing compressed air, a tube is inserted into the stopper of the receiver communi-



Small Glass Tube for Exploration.

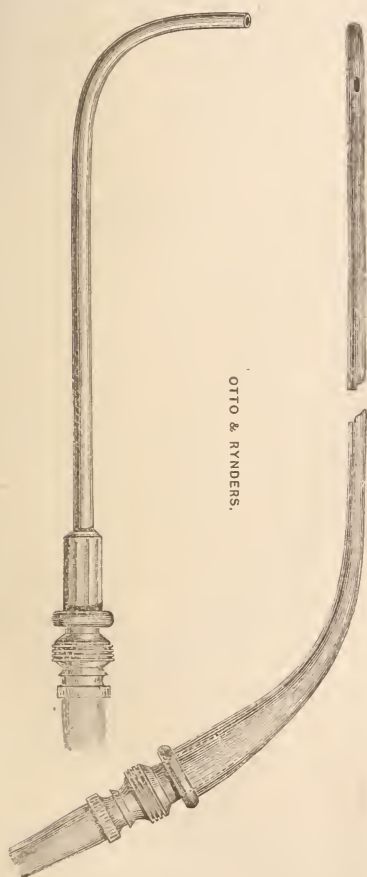
cating with the canal *h*, and reaching to the bottom of the receiver. To the end of the canal *h* is screwed a caoutchuc tube fifty cm. long, with a conical point, which is inserted into the different instruments. A stop-cock (*k*) may be attached here. At the inner end of this tube there is a floating valve (*i*), which only closes the canal *g* when the receiver becomes too full of fluid, so as to prevent its



entrance into the pump. By screwing *l* into *m* we attach a clamp, by which we may fasten the apparatus to a table or other object.

FIGS. 7 AND 8.

Tube for removal of Mucus and
Membranes from Larynx.



Stomach Tube.

The air-pump and other parts, except the glass receiver, are made of hard rubber, so that nothing further is required to secure air-tight closure of different parts. The air-pump and receiver are united air-tight by merely pressing them firmly together. The material also permits the better cleansing of the instrument.

Removal of Fluid from Abscesses, etc.—The air may first be rarefied, and the stop-cock opened when the trocar introduced into a cavity has been attached; or the cavity may be gradually evacuated while the stop-cock is open, and the air rarefied afterward. Either way the fluid flows into the receiver, but by the first plan the rapid suction may draw a plug of pus into the canula; or if a lance-shaped canula be employed, a blood-vessel may be injured. It is also possible that instead of preventing the entrance of air into the cavity, if the skin around the puncture be thin, air may enter around the canula when part of the fluid has been

evacuated, and the amount of rarefied air in the receiver is no longer proportionate to the evacuated fluid. In such a case the action of the external atmospheric pressure would continue till the air in and outside of the cavity were of equal density; that is, till air had entered the cavity. This accident may be avoided by pumping out gradually.

Fluid collected in the receiver may be emptied out by removing the stopper.

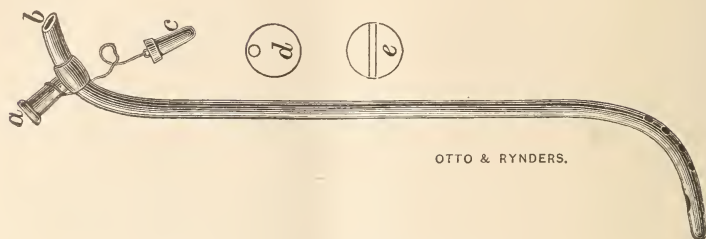


FIG. 9. Tube for emptying the Bladder.



FIG. 10. O'Burns's Rectum Tube.



FIG. 11. Injecting Tube.

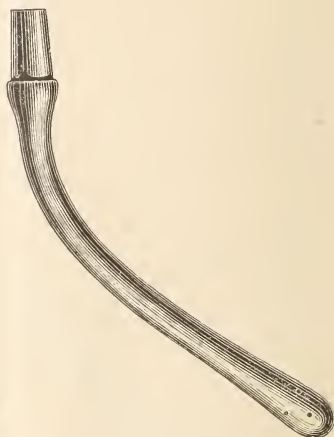
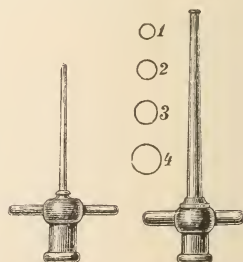
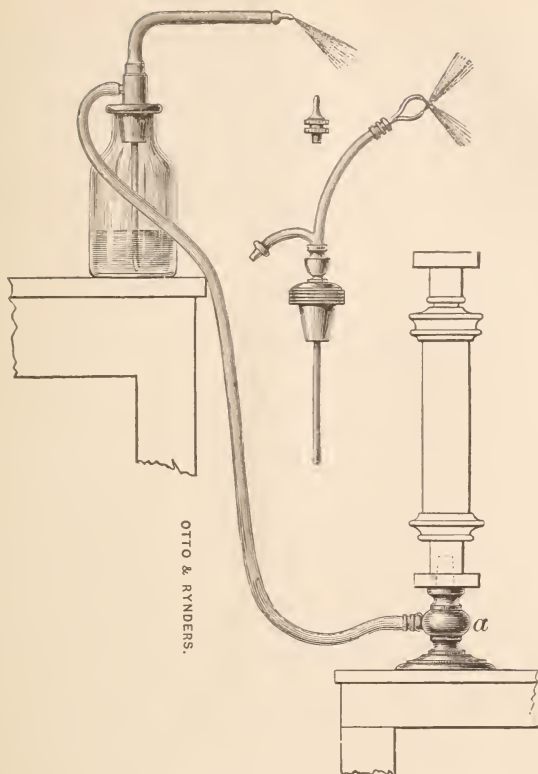


FIG. 12. Female Tube.

The trocars may be ordinary ones, or after Professor Billroth's pattern. The latter consists of a canula (*a*) with a uniting piece (*b*) attached, through which the cylindrical trocar *c* passes air-tight. At the lower end an opening (*d*) communicates at an angle with the canula, and at this point the pump is attached. The trocar is to be withdrawn to *d* after the pump has been attached; the entrance of air is thus prevented.



FIGS. 13 AND 14. Tubes for embalming Dead Bodies.



FIGS. 15, 16, AND 17 Aspirator connected with the Atomizer.



FIG. 18. Cupping Glass.



FIG. 20. Breast or Milk Glass.

THE DEAD HEROES.—At a meeting of the members of the medical profession held in Memphis, Tenn., on the 7th of November, 1873, Dr. J. H. Pittman was called to the chair, and Dr. E. Miles Willett appointed secretary. Dr. A. Erskine, Dr. B. W. Avent, and Dr. W. V. Taylor, having been selected as a committee for the purpose of presenting resolutions expressive of the sentiments of the assemblage, reported the following, which were unanimously adopted:

Whereas, it has pleased Almighty God, the Great Ruler and Arbiter of the destinies of men, to visit our city with a malignant pestilence, which has swept away in its desolating march seven of our professional brethren and friends—viz., Drs. Crone, Minor, Kennon, Hatch, Blount, Freeman, and Williams—therefore be it resolved:

1. That we who have been so fortunate as to have passed safely through its ravages do deplore and mourn their fall with a true and manly sorrow.

2. That in their deaths the medical profession of Memphis and the profession throughout the land have sustained losses immeasurably great.

3. That we feel a common sympathy and a personal affliction, the result of a common sorrow, and the rupture of the tenderest ties of sympathy and love.

4. That humanity, affected and bereaved, weeps over their fall; on its altar they with manly devotion laid down their lives.

5. That the city of Memphis could have sustained no greater sacrifice than the death of her noble and gifted physicians.

6. That we tender to the families of the deceased our sincerest sympathies in their irreparable loss.

7. That a copy of these resolutions be forwarded to them, and to the Nashville Medical Journal and American Practitioner for publication.

THE AMERICAN PRACTITIONER.

FEBRUARY, 1874.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Communications.

CHOLERA HYGIENE.

BY ELY M'CLELLAN, M. D.,
Assistant Surgeon U. S. A.

During the months of August and September, 1873, it was the fortune of the writer of these pages to witness the epidemic of cholera in the counties of Garrard and Marion of the state of Kentucky, and at a later date to investigate the manifestations of the disease as they appeared in some twenty-six counties of the state.

A careful study of this epidemic, and a rigid comparison of the features presented by it with authentic histories of the disease, as well as those manifestations which the writer had witnessed in widely-separated regions of the United States, developed no new facts in the etiology of cholera.

In the vast majority of the locations infected with cholera in the state of Kentucky during the past year *the direct importation of the disease* has been most satisfactorily proven. The facts relating to the individuals who acted as the porters of the disease have been obtained, and step by step, from its

inception to its close, the epidemic has been traced. At a few points the data which relates to the importation of the disease is obscure; but as each of these localities is upon the line of public travel, it is safe to affirm that these instances present no exception to the fixed laws by which the progress of cholera is governed.

In witnessing and noting the effect produced upon the public when the disease of the past summer was developed, the writer was profoundly impressed with several facts.

I. The eagerness with which the public mind fastened upon any thing which could give information of cholera. This was not alone exhibited by those individuals who were influenced by personal fears, but by noble men and women, who lavishly poured out their substance as well as sympathy upon the sick and dying.

II. The terror which was exhibited in some localities on the development of the disease, and the inefficient means adopted, from a want of knowledge, to prevent its spread.

III. The utter impossibility of instituting proper sanitary regulations in a cholera district *after* the disease had become epidemic.

Deeply impressed with these facts, and with the train of thought to which they lead, the following outlines of the etiology of cholera, and a statement of the sanitary precautions which should be adopted to prevent the development and spread of the disease, have been prepared. Scarcely a doubt exists, judging from past experience, that cholera development can be controlled by sanitary measures, and that in isolated cases the disease can be stamped out by the proper use of disinfectants. But how powerless are sanitary officials in communities where the alarming ignorance and carelessness of individuals favor the development and spread of this most fatal disease!

When the authorities of inland towns as well as of large cities are convinced of the efficiency of hygienic regulations

in protecting the health of communities intrusted to their care; when the members of such communities are possessed of sufficient knowledge of the disease to enable them to perform their individual duties *before, during, and after* an epidemic; then may scientists who devote their attention to the preservation of the public health hope to effectually enforce such measures as may check cholera as effectually as vaccination has checked small-pox.

That the death-march of cholera has not been arrested, that again the disease has advanced to the Atlantic coast of Europe, that again the British islands have been invaded, that again the disease has been brought to New York harbor, renders it necessary that the possible development of cholera in America during the ensuing year should be met by every sanitary engine of destruction which it is within the power of the public to employ.

On the 30th of September, 1873, four cases of cholera were reported to have reached Liverpool by direct importation from Havre.* On the 7th of October of the same year a case of cholera was discovered on a ship from Caen, which had passed Gravesend, on the river Thames; and during the fall of the same year two Hamburg and one Havre steamers brought the disease into New York harbor. In each of these instances the disease was vigorously stamped out at the quarantine.

The events of the next few months will determine whether the United States will again become inflicted with the disease from European importation, or whether the poison from which the disease is developed has remained dormant in localities which were affected during the past year, to be redeveloped in its full malignant power at a fitting season.

What is cholera? This question—so often asked, so often answered—has been ably met by Macnamara, from whom we quote in detail :

* Medical Times and Gazette, October 4 and 11 and November 1, 1873.

"Cholera is a disease which is generated at all seasons of the year among human beings inhabiting certain parts of India. It is capable of being disseminated over the world through the instrumentality of the fomites of those who suffer from the disease, though it may be only in the mild form usually described as cholérine. Cholera has a predilection for persons whose general health has been impaired from defective hygienic circumstances, from disease, want of proper food, or any similar cause. In the same way depression of the nervous force, by inducing an abnormal condition of the intestinal secretions, whether permanent or temporary, renders an individual peculiarly liable to an attack of cholera.

"The seizure is characterized by nausea, faintness, and a feeling of oppression in the præcordial region, griping pains in the abdomen, frequent watery purging (the stools being alkaline when passed, and in appearance resembling rice-water), constant vomiting, suppression of urine, and profuse perspiration; the skin is inelastic, and that of the hands and feet shriveled and dusky; the eyes are sunk and the features pinched; cramps are felt in the limbs; there is difficulty of breathing, intense thirst, excessive restlessness, rapid, small pulse, and suppressed voice; the external temperature of the body sinks below 38° F., and a peculiar sweetish, sickly odor (fishy) is exhaled from the body, breath, and dejections.

"If left to nature about one half of those attacked with cholera recover of themselves, reaction supervening, and often being accompanied with fever, and not unfrequently with suppression of urine and various complications; or the disease may terminate within a few hours from its commencement in fatal collapse."*

A careful study of the various epidemics of cholera amply demonstrates the following facts: † that cholera, or that which produces cholera, is portable; that the poison may be carried from an infected locality to one that is healthy, and that in the latter the disease may be developed and assume a malignant epidemic form; that the disease advances in a general westward course through the world, and invariably follows the lines of travel; that the most active agents in its distribution are individuals who, having become infected, it may be insensibly, at a point where the disease is epidemic, pass

* Treatise on Asiatic Cholera, C. Macnamara. Churchill & Sons, London.

† Science and Practice of Medicine, Aitkin, Amer. ed., p. 620; Principles and Practice of Physic, Watson, Amer. ed., p. 916; Text-book of Practical Medicine, Niemeyer, translation; Notes on Asiatic Cholera, J. C. Peters, Van Nostrand, N. Y.; Cholera in Insular Positions, Smart, Lancet, May, 1873; Report on Epidemic Cholera, Circular No. 5, S. G. O., Washington, 1867; Report of English Army Medical Department, London, 1871; "Channels through which Cholera is Communicable," Murray, British Medical Journal, August, 1873.

over the ordinary lines of travel, and place a greater or less distance, according to the length of the period of incubation and the rapidity with which the journey is performed, between the point of original infection and the localities at which they establish foci of disease; finally, that the cholera poison may be carried from an infected point to a healthy community, in which the disease may become epidemic, while the individual who has acted as the porter of the disease enjoys an entire immunity.

Through the kindness of Dr. John C. Peters, who possesses a most accurate knowledge of the habits of cholera and of the topography of its favorite routes, whose maps are monuments of his indefatigable devotion to the study of this disease, we are able to trace in Asia and Europe the steps of the epidemic which burst upon the United States during the summer of 1873.

The great epidemic of cholera in the years 1865, '66 and '67 left Russia with only eighty-three cases of the disease in 1868. These cases occurred in Kiev, the holy city of Russia, situated on the river Dnieper, and to which city over fifty thousand pilgrims come annually. In 1869 there were nine hundred and eleven cholera cases in Russia, which spread from Kiev north-east toward Orel and Moscow, and down the river Dnieper to Odessa. In the mean time the great Hurdwar epidemic of 1867, in Northern India, had been carried along the north Persian route, by way of Jelalabad, Cabul, Herat, Meschid, to Asterabad, upon the Caspian Sea, across which it was conveyed by steamers to Baku, and from thence overland, by way of Tiflis, to Poti, upon the Black Sea. In 1870 cholera was developed at Taganrog, on the sea of Azof, and at Kertch, in the Crimea, and spread through Russia. In consequence of this importation, in 1870, in Russia twenty thousand one hundred and forty cases occurred.*

*Practitioner, Oct., 1873, p. 308; Brit. Med. Jour., Aug., 1873, p. 220; Sixth Annual Report of the Sanitary Commissioner with the Government of India.

In 1869 a fresh outbreak of cholera occurred at Peshawer, in the Punjab. Again the disease was conveyed over the North Persian route toward Europe. At the same time it was carried down the river Indus, infecting all towns upon its banks, to the city of Kurrachee, at the mouth. From this point the disease was carried up the Persian Gulf to Bushire; from thence overland, by way of Shiraz and Ispahan, to Teheran, at which city the North and South Persian routes come together.

The ports of the Black Sea were again infected in 1870. The epidemic in Russia was re-enforced, and in 1871 there were three hundred and five thousand two hundred and twenty cases reported, and the disease was carried into Poland. By means of the travel upon the rivers Niemen and Vistula, which rivers are connected with the Dnieper by canals, cholera was carried to Konigsberg, Stiffin, and Dantzic, on the Baltic. In these cities the epidemic lasted during 1871, '72 and '73. In 1872 Prussia and Austria were invaded. Again, in 1873, did the disease appear in the Baltic cities, and spread through Europe to England.

In February, 1873, cholera was reported in the city of New Orleans, but whether it was imported from Hamburg or from Rio de Janeiro remains to be solved.

The epidemic of cholera, as it affected Garrard County, Ky., presents a notable instance of the portability of the disease.

On the 10th day of August, 1873, a gentleman arrived in Lancaster, having traveled on horseback from Russellville, Tenn., which town prior to his departure was infected with cholera. A few hours after his arrival in Lancaster he was attacked with the disease. No care was taken to disinfect the dejections or in any way to isolate the case. He was visited by his father-in-law, who remained one night in the sick room; the next day was taken with cholera, from which he died in a few hours. The second victim to the disease

was a negro man, who had been employed to nurse the case. From these cases the disease spread and became epidemic.

The report of Drs. Berry and Wilson,* gentlemen who responded to the call of the suffering citizens of Lancaster, having been questioned by some ill-disposed individuals, we fully indorse, from personal observation, the correctness of the statement of these gentlemen.

By the majority of authorities the period of incubation of cholera ranges from thirty-six hours to six days. Pettenkofer, in 1853, demonstrated that in some instances this period might be prolonged to twenty-one days. Taking into consideration these facts and the rapid rate of modern travel, it is in no way surprising that cholera strides across oceans or continents, and is developed almost simultaneously in widely separated localities.

The late epidemic fully illustrates this fact. During the months of February, March, and April, 1873, cholera was in the city of New Orleans, but no point outside of that city was known to have been infected. During May nine distinct points, widely separated, but all within direct communication with New Orleans, were infected, and from these points the course of the disease can most easily be traced.†

Central Kentucky furnishes several notable instances of the immunity from the disease which occasionally individuals enjoy, although they may be the carriers of the infection to others.

Dr. L. S. McMurtry, of New Orleans, relates a case which came under his observation during a visit to Garrard County. A negro woman was attacked with cholera September 2, 1873, and died after fifteen hours' illness. She had lived in a retired locality, had not been from home all summer, had been exceeding careful as to her diet, and her house was a comfortable cabin. No cases of cholera had occurred in the vicinity. Her death was followed by the development of choleraic symptoms in all the members of her family, from which two children died. No cause could be assigned to this outbreak until it was discovered that a boy from the infected district in Lancaster, which town

*A History of Cholera at Lancaster in 1873, Amer. Prac., Oct., 1873.

†Publication of the American Public Health Association.

was nine miles distant, was living in the house; that he had arrived a few days prior to the attack of the woman, and that since his arrival he had been in all respects one of the family. There can be no doubt that he was the infecting agent, although he personally escaped the disease.

Dr. S. P. Craig, of Lincoln County, Ky., in describing the outbreak of cholera in the town of Stanford in that county, states "that cholera was developed, August 29, 1873, in a portion of the town occupied almost exclusively by negroes, and the disease was traced to a filthy privy and cesspool in rear of the houses in which the first cases occurred. Prior to this outbreak several refugee negroes from the infected district in Lancaster arrived at these houses, and remained until the disease was developed in Stanford. They are known to have used this privy. None of this party were attacked with cholera."

These are by no means isolated instances, but are fully corroborated by history of other epidemics.

The distribution of cholera by individuals, the length of time to which the period of incubation may be extended, and the fact that individuals may convey the poison without themselves becoming the subjects of the disease, fully refutes the theory "that cholera is conveyed by some mysterious agency, which enables it to overleap all barriers and suddenly to develop itself in distant and isolated communities."

Endemic in that country which is watered by the Ganges and its tributaries, following the lines of travel, frequenting the large social and religious gatherings of the inhabitants, cholera ever strives in their dispersion to find an outlet from the country. Grand highways of pestilence have been formed, and the trails of the disease are found over Asia, Europe, America, and the eastern coast of Africa. Nor have its ravages been confined to continents; for the islands of the Indian and Atlantic oceans, of the East Indian, Australian, and Polynesian archipelagoes, and those of the Mediterranean Sea, have all undergone severe epidemics.*

* Dr. Smart, *Cholera in Insular Positions*.

Ever unsuccessfully striving to acquire a local habitation in the Western World, thousands of miles of land and water are crossed. The severity of Russian and Canadian winters are withstood in the close, hot, ill-ventilated cottages of the peasants; but at last the poison-producing power dies, the disease outside of its natural habitation becomes extinct, is no more capable of reproducing itself. But the great highways are still open, and presently the warning is given that once again cholera has commenced its death-march.

The only recorded instance which will bear a searching investigation into all its details of cholera originating outside of Hindoostan is that related by Estrazulas of the endemic of 1866, '67 and 68 in South America.* In this instance there was a combination of all the well-known "factors" of cholera within the lines of the opposing armies during the Paraguayan war. The disease, once developed, obeyed the known laws by which its course has always been governed, and gradually was carried through the Argentine Confederation and Uruguay, reaching the last-named only after the third outbreak.

The theory of Estrazulas, that cholera originated in Paraguay, finds an opponent in Dr. Rego, president of the Imperial Academy of Medicine at Rio de Janeiro,† who shows that before the disease occurred in Paraguay the cities of Pernambuco, Guanzy, and Rio de Janeiro had been infected with cholera; that prior to the outbreak in Paraguay a troop-ship left Rio for the seat of war; when two days out from port the troops on this vessel were attacked with cholera; that after entering the Parana River, but before coming within the lines of the army, she was turned back and placed in quarantine at St. Catharine, Brazil.

In the review of Dr. Rego's work by Estrazulas much stress is laid upon seeming inconsistencies in the narrative

* Epidemic Cholera in South America, Estrazulas; American Journal Medical Sciences, July, 1873.

† Review American Journal Medical Sciences, October, 1873.

of events; but the reviewer seems to have overlooked the fact, in his anxiety to establish his "endemic theory," that the infected troop-ship, although she did not come within two hundred miles of the locality in which cholera was developed, still was on the Plata and Parana rivers, and was in communication with other vessels for some time before she was turned back to quarantine.

According to Dr. Smart,* cholera is endemic on the Malay Peninsula and the islands of the Asiatic Archipelago, but he is able in each outbreak to trace the exciting cause to importation.

During the past year Pelikan and other Russian sanitarians startled the medical world by announcing their conclusion that cholera had become endemic in Russia; that the last outbreaks of the disease in Eastern Europe were not from new importations from Asia, but were from the seeds of the disease having remained latent from former epidemics.

The evidence upon which this opinion was based seemed at the time it was published to be unanswerable; but at the recent meeting of the British Medical Association Dr. Radcliffe,† representing the Medical Department of the Privy Council, demonstrated the erroneousness of the conclusions to which Pelikan had arrived. It can be conclusively shown that although the disease lingered at Kiev, the holy city of Russia, during the years 1865, '66, '67 and '68, it had been constantly re-enforced by successive cholera arrivals by way of the Red Sea and North Persian routes. The mass of evidence which has been collected by careful observers‡ in the

* London Lancet, March 22, 1873.

† Medical Times and Gazette, July 12 and August 9, 1873.

‡ Lecture on Epidemic Cholera, Professor Alfred Stillé, University of Pennsylvania, Philadelphia Medical Times, July, 1873; Fauvet on Cholera, Medical Times and Gazette, October 18, 1873; Memorandum on the Propagation and Prevention of Asiatic Cholera, William Rudd, M. D., Clifton, 1861; Watson's Practice of Medicine, op. cit.; Niemeyer's Text-book of Medicine, op. cit.; Aitken's Science and Practice of Medicine, op. cit.

history of cholera may be summed up under a few propositions.

1. *That cholera is a contagious disease, resulting from an organic matter, which entering into the alimentary canal acts upon and destroys the epithelium.*

Without entering into a description of the pathological conditions induced by cholera, the report of the post-mortem examinations made by Hayem, of Paris, in 1873 are cited as indicative of the results obtained by previous observers :

"The only organs constantly involved are the intestines. The capillaries, the different layers of the epithelium, the sets of glands, and the villi had all undergone certain changes, but differed in no way from the changes observed in ordinary intestinal catarrh. In the blood there was found an increase of the white corpuscles and small, fragmented globules. These are explained by the stasis of the blood in the algide period and the decrease in the proportion of water. No microscopic characters peculiar to cholera are found."*

Jaccoud, in his admirable paper on Asiatic cholera in *Pathologie Interne*, translated by Prof. Octerlony, of Louisville, states: "The other lesions observed in cholera and the symptoms arising from them are not immediate effects of the poison, but necessary consequences of the primary lesions, and in a great measure of mechanical origin."†

2. *That the respiratory and digestive organs are the avenues by which individual infection is accomplished.*

The majority of observers unite in the opinion that by the medium of infected air, water, and food the cholera poison gains access to the system. Dr. Ball, of the Hôtel Dieu, thinks that although the digestive tube is the habitat, as it were, of the choleraic poison, yet the lungs are the principal

* London Lancet, October 11, 1873.

† Richmond and Louisville Medical Journal, August, 1873.

Aitken's Practice of Medicine, op. cit., p. 623; Niemeyer, Text-book, op. cit., p. 646; Manual of Practical Hygiene, Parkes, Am. ed., 1868, p. 62; Jaccoud, Asiatic Cholera, op. cit., p. 8; Snow's Report on the Cholera Outbreak in Saint James's Parish, London, Churchill, 1855, p. 119; Medical Times and Gazette, October 18, 1873; British Medical Journal, August 23, 1873.

viæ of infection. Dr. Murray, in his admirable paper on the "Channels through which Cholera is Communicable," records his opinion that in some instances the cholera poison enters the system through the skin; and further states that the profuse cold perspiration of a cholera patient, from its peculiar and characteristic odor, is an evidence of the elimination of the disease by the same means.

3. *That the active agents in the distribution of the cholera poison are the dejections of persons who have become infected, or of those in whom the disease is fully developed; that in these dejections there exists an organic matter which in a certain stage of decomposition is capable of reproducing the disease.*

That the rice-water discharges are not simply the watery portions of the blood, as is popularly believed, is demonstrated by chemical examination.

Dr. Thudicum, who has made a careful quantitative examination of the dejecta of cholera patients, finds that these fluids contain "vibriones, cells from the surface of the intestines, granular *débris* of cells, mucin, modified hemochrome, albumen, an albuminous body giving a rose-pink reaction, butyric acid, acetic acid, ammonia, leucine, and some inorganic salts. The discharges in a state of active decomposition evolve nitrogen, then hydrogen, and ultimately nothing but carbonic acid." *

The most careful and patient investigations have failed to determine the presence of any fungoid growths in cholera dejections that differ from those grown in the dejections of patients who may die from other intestinal diseases.

Macnamara states that the rice-water discharges are always alkaline; that soon after they are passed they separate in the vessel into two portions, the flocculent matter sinking; that the rapidity with which this takes place is an evidence of the severity of the attack; for if this separation takes place very

* Macnamara, op. cit., p. 351.

speedily, it indicates the complete death and disintegration of the organic matter, and an unfavorable termination of the case may be predicted. He says: "The flocculent matter of the stools is composed of epithelial cells and the mucous lining of the intestinal canal in various stages of decomposition. The epithelial cells, disintegrated and changed so as scarcely to be recognized under the microscope, are full of molecular matter, precisely as in other instances of decomposing organic matter, but no new chemical elements can be discovered."

It is from this organic matter, in what is termed the vibronic stage of decomposition, that Macnamara insists that the dejections of cholera receive their contagious properties; and he bases his opinion upon the results obtained from the experiment hereafter noted.

If a sufficient amount of the fresh dejecta of a cholera patient to produce a slightly opaline tinge be added to water, and the fluid be exposed to the full rays of a hot sun, at the end of twenty-four hours "the vibrio stage of decomposition or change in the organic matter is in full force, the surface of the fluid being covered with large vibriones. During the next twenty-four hours no additional changes will be observed, but on the next ciliated infusoria will have appeared in the fluid and replaced the vibriones, that are no longer to be found in motion, but collected together at the bottom of the vessel. In a few days longer bubbles of gas will rise to the surface, and the sides of the vessel will be lined with confervoid growths." *

Prof. Thiersch fed white mice upon the dejecta of cholera patients. Strips of paper were saturated in the dejecta at various stages of decomposition, with the result that all the animals who ate of the discharges which had been exposed to the air for from two to six days were seized with diarrhea,

* Macnamara, op. cit., p. 396; Lionville on the Propagation of Cholera, Medical Times and Gazette, October, 1873.

suppression of urine, and after death the presence of large quantities of an odorless, colorless liquid was detected in their intestines.

In 1866 Dr. Burdon-Sanderson* confirmed these experiments of Thiersch and added much interesting data. He demonstrated that the liability to attack was greatest when the papers from the third and fourth days of decomposition were eaten, much less and nearly equal as regards the second and fifth days, and least of all as regards the first day. The fluid contents of the intestines of mice that had died from eating human cholera dejections was collected and subjected to the same tests, when it was found that it communicated "a malady indistinguishable in character from that developed by the human dejections in other animals of the same kind."

These experiments have been fully corroborated by those of Thudicum, Marshall, Meyer, and others; but in the hands of Macnamara† they seemed to have failed, while good fortune gave him the results of an accident, unfortunate to the individuals involved, but of incalculable value to science.

"In 1861 a small quantity of the dejecta of a cholera patient was known to have been accidentally washed into a vessel containing water. The mixture, after being exposed to the heat of the sun for one day, was swallowed by nineteen men. They all remained perfectly well during the day; ate, drank, went to bed as usual, and slept as usual. One of them on waking the next morning was seized with cholera. The remainder of the party passed through the second day perfectly well, but two more of them were attacked with cholera the next morning. All the others continued in good health till sunrise of the third day, when two more cases of cholera occurred. The other fourteen men escaped the disease. That the water of which they drank had been contaminated with organic matter was first discovered from the appearance of vibriones on its surface, and this ultimately led to the detection of all the circumstances. Cholera was not prevalent at the time, nor had it visited the locality at which this occurred for several years."

This occurrence led to a number of experiments, which at this time can be but briefly noticed, and from which it was

* Communicability of Cholera, *London Lancet*, Dec., 1867, p. 770.

† Macnamara, *op. cit.*, pp. 196, 381, 395.

determined that if the alkaline cholera dejecta, even in a stage of decomposition, be rendered acid, the molecular action is instantly destroyed; that if the dejecta of a cholera patient are mixed with the healthy gastric juice of carnivorous animals, the molecular changes are arrested and the organic matter appears to be digested. Reasoning from these experiments, it is safe to assert:

I. That the dejections of a cholera patient swallowed, before the stage of vibronic decomposition has taken place, by a healthy person will be so acted upon by the acids of the stomach that molecular decomposition will be impossible.

II. That in a healthy subject, the functions of whose stomach are regularly and properly performed, the action of the gastric juice will destroy the molecular process of decomposition, and no infection will result.

III. That if a large quantity of water infected with cholera stuff is swallowed, a portion will inevitably pass at once from the stomach to the intestines, and as their contents are alkaline the process of infection will quickly take place; or if this contaminated water be drunk while the individual is fasting and the secretions of the stomach are alkaline, the gastric juice will not be sufficiently powerful to arrest the decomposition, and infection will result.

The experiments upon which these assertions are based we advance as sufficient reply to and explanation of the circumstances which, in 1833, led to the assertion that cholera was not a contagious disease. So universally was this theory accepted, and so conclusive seemed *the facts that individuals had tasted and drunk of cholera dejections, had fed the same to animals, and had even inoculated themselves with the rice-water discharges, and yet all escaped with impunity*, that at the present day the dogma of non-contagion is adhered to by many.

It is further urged against the theory of the contagiousness of cholera, the supposed immunity to the disease enjoyed by the attendants upon the cholera sick.

Is not this a question worthy of careful consideration? We are profoundly impressed with the belief that, proper precautions having been taken, cholera attendants may enjoy the most perfect security from the infection. But the ques-

tion is, are those attending upon a case of cholera safe when the disease and its products are left to nature alone?

During an epidemic of cholera all the members of a community are not attacked. No epidemic upon this continent has been entitled to be denominated pandemic. *An epidemic of cholera does not occur in every locality contaminated by the arrival of cholera patients.** It is particularly those whose systems are vitiated by other disease; those who are suffering from depression of the nervous force from any cause, but especially from that depression which follows excessive fatigue, debauches, or fear; those who live in open violation of all hygienic laws; those impoverished by want, who are particularly liable to the disease. We have shown how the system of a healthy person may resist the invasion of the disease, but these individuals have nothing to resist with, and therefore succumb.

It is unnecessary to refer to Indian or European epidemics to illustrate the truth of these assertions. The epidemic of 1873 in the state of Kentucky furnishes many marked examples, and from our notes collected for a history of the epidemic the following cases are taken:

1. A young man eighteen years of age, a native of Nelson County, was infected in Marion County, where he had been in attendance upon a friend who died of cholera. On the 20th of August he returned to his home and was attacked with the disease. Many hours passed before a physician could reach him, and his friends ignorantly emptied the dejections upon the ground near the house. The case terminated fatally after nine hours' illness. Upon the arrival of his physician a most careful disinfection was instituted; but all the decomposing dejecta were not reached, for six members of his family were attacked by cholera, and three died.

2. September 2d a young man twenty-six years of age died in Nelson County of cholera. On the 31st day of the previous August he had visited the house of a relative in Marion County where there were several persons sick from cholera, and where no process of disinfection had been instituted. During his visit he sat upon a porch which was quite near to a mass of *débris* upon which all the cholera dejecta had been emptied; and upon this porch he ate his dinner. That evening he left for his home; and it is positively ascertained that in no other

* Jaccoud, op. cit., p. 8; Macnamara, op. cit., p. 194; Physical Course of Epidemic Diseases, A. H. Howe, Churchill, London, 1865.

way did he come in contact with contagion, yet in two days' time we find him sickened and dead.

Another instance is strikingly illustrative:

3. On the 25th of August, 1873, a lady died in the city of Bowling Green of cholera. Her body was removed to Louisville for burial, and the coffin having been opened the body was viewed by her family. Within a few days four cases of cholera occurred in the family, from which three died, and all the remaining members suffered more or less violently from diarrheas.

4. That cholera dejecta coming in contact with and drying upon any object, such as articles of furniture, bedding, or clothing, will retain indefinitely its power; and that under favorable circumstances the process of decomposition will at once commence.

To demonstrate the value of the facts on which this proposition is based, Macnamara mixed a fresh cholera dejection with sand and allowed the mixture to dry rapidly under the heat of the sun. After a lapse of seven years "a small quantity of this earthy-looking stuff was placed in water and exposed to the sun, when it could not be distinguished from a fresh cholera stool." *

With the knowledge obtained from this experiment we are able to understand the numerous instances upon record of persons being attacked with cholera after wearing the clothing or sleeping in beds previously used by cholera patients.

To refute the theory of contagion as illustrated under this proposition, the fact is brought forward of cholera clothing having been washed with impunity on the part of those performing the work. Such, however, are isolated instances, and *are accounted for by the fact that the susceptibility of individuals to cholera poison varies so greatly, and that the number of careful, healthy persons who are physically liable to the disease is always small in every community.*

5. That through the atmosphere of infected localities the disease is frequently communicated to individuals.

* Macnamara, op. cit., p. 398.

Upon this point the investigations of Niemeyer induced the following record of his views:

"The cholera poison is rarely taken into the system by drinking water containing it. As a rule, it undoubtedly enters the nose and mouth with the air, and is swallowed with the saliva. Using infected privies is so dangerous, because they are the favorite lurking-places for cholera-germs, and the gases arising always contain dust-like particles."

The results of Pettenkofer's theory are that the emanations from infected soil impregnate the atmosphere with the cholera poison. It is indisputable that when cholera dejections are deposited in impure privies, cesspools, or drains the poison is propagated and diffused. Adair County, Ky., furnishes a marked instance.

In the rear of a livery-stable situated in the town of Columbia was a privy, the vault of which was filled to overflowing with putrid excrementitious matter, and the ground in its vicinity was saturated with the drainage from it. During the months of July and August some attempts were made to cause this privy to be disinfected and cleaned. These attempts at sanitary reform were resisted by the proprietor of the stable. Late in the month of August a negro boy, who had become infected with cholera in another county, came to this stable, suffering from diarrhea, and made use of this privy. The diarrhea became cholera, and he died; and from that infected privy an epidemic of cholera spread, which cost that community twenty-six valuable lives.

6. That water contaminated by surface-washings, by drainage from neglected sewers, cesspools, or privies, may and does become contaminated with the cholera poison.

Water undoubtedly performs a most important part in the diffusion of cholera. Macnamara insists that an epidemic outburst of cholera can only occur through the drinking-water of the place becoming contaminated with cholera matter.*

The investigations of Dr. Snow, in London, during the epidemics of 1849, 1853, and 1854 prove that cholera may be actively distributed through the medium of drinking-water.

* Macnamara, op. cit.; "Mode of the Communication of Cholera," Snow, Churchill, London, 1855; "Influence of Impure Water in the Diffusion of Cholera," British Medical Journal, August, 1873.

The persistence of a cholera epidemic in Russia during the winter season was only partially accounted for by the habits of the Russian peasants, the construction of their houses so as to exclude all air, the faulty heating apparatus, etc., until Dr. Routh pointed out that in the Russian settlements every thing is thrown out around the dwellings; and that, owing to the intense cold and the great expense of transporting drinking-water, the inhabitants are in the habit of drinking the water from melted snow; that the snow used for this purpose has been frequently that upon which the cholera stools have been thrown, and that by this impure drinking-water the epidemic is prolonged there can scarcely be any doubt.

The epidemic in Central Kentucky during the past season furnishes a striking illustration of the power of drinking-water in disseminating the disease:

Several isolated cases of cholera had occurred, in the town of Lebanon, near to a small creek which forms one of the drains of the town. A few days after their occurrence the Marion County Fair was held upon the grounds near Lebanon. As the water-supply was less than the demand, the deficiency was supplied from the town. Unfortunately a well was selected on low ground and quite near to the banks of this creek. On the second day of the fair a violent rain-storm deluged the country. The creek was filled to overflowing, and it was impossible that the surface-washings should not have infected this well. On the third and fourth days of the fair the water of this well was served as usual; and on the night of the last day (August 31st) cholera, malignant in its type, was developed in all localities inhabited by those who had visited the grounds and drunk the water.

Great stress is laid upon the fact that subsequently the water from the same well was used by individuals with impunity, for which certainly the theory of vibrionic decomposition, which has been so fully noted, offers a sufficient solution.

7. That without a combination of all the well-known factors of cholera the disease can not originate de novo.

Masses of decomposing *débris*, animal or vegetable, can not of themselves produce the cholera poison. They are the hot-beds in and on which the cholera excretions having been placed the poison is reproduced with fatal rapidity.

Peters points out as the principal factors of an epidemic of cholera:

1. An atmosphere impregnated with the products of fermenting human excrement.
2. An elevated temperature, with a still, stagnant, and peculiarly oppressive condition of the atmosphere.
3. Such meteorological conditions as have a marked tendency to favor the chemical decomposition of organic substances.
4. Lowness of site, swampy ground, moist soil, decomposition of vegetable matter, and all those causes which tend to produce bilious and remittent fevers.
5. Foul camping-grounds, filthy streets and yards.
6. Impure water.
7. Bad, spoiled, or defective food.

The summary of cholera causes by Dr. Montgomery may be added to the list of Peters. It is as follows:

1. Undue exposure to the vicissitudes of climate, especially during cold nights following hot days.
2. Physical fatigue and nervous depression.
3. Undue abstinence or deprivation of food.
4. Excesses in eating, drinking, and licentiousness.
5. Vitiated atmosphere from all causes.
6. Direct exposure to the contagion of disease.

The summaries given agree with those of all observers who have devoted sufficient study to the disease to entitle them to be recognized as specialists.

During the past year Dr. G. E. Nicholas, the medical officer of health for Wandsworth, England, advances the theory that flies form one of the most, if not the most, common and direct means of the propagation of cholera. This opinion is based upon the argument of Prof. Leidy, of Philadelphia, and Dr. Nicholas's personal observations. The communication concludes with the remark that "the diarrhea season is generally believed to be associated with the fruit season, and perhaps justly so; but then it is the fly season also, and the fruit may not be *per se* the cause but only the vehicle of the poison communicated by the fly." *

* London Lancet, November 15, 1873.

Since the preceding pages were prepared the following translation of the paper of Högyes has appeared in the current medical journals. It is so strongly corroborative of the statements of Thiersch, Sanderson, Macnamara, and others, which have been noted in detail, that the translation, as it appeared in the Medical Record of January 15, 1874, is hereby transcribed as additional evidence of the truth of the facts elicited by earlier observers. The italics are our own.

"ACTION OF FRESH CHOLERA DISCHARGES UPON ANIMALS.—An interesting series of experiments with the discharges from cholera patients was made during the latter part of July of this year (1873) by Andreas Högyes, of the University of Pesth, a report of which is published in the *Centralblatt für die Med. Wissenc.*, No. 50. The points which it was sought to determine were, in brief, the following:

"I. *Do fresh cholera discharges operate injuriously upon the organism of lower animals, and under what manifestations?*

"II. *Does an artificially excited catarrh of the stomach and bowels increase the susceptibility to the action of the cholera discharges?*

"III. *Can a current of air bear away particles from the discharges which are capable of affecting the organism injuriously, and what difference is there in this respect between non-disinfected and disinfected cholera discharges, simple diarrheal discharges, and putrefying fluids?*

"IV. *Are cholera discharges freed from their form-(living) elements still able to act upon animals?*

"V. *What portions of the disinfected or non-disinfected discharges does the air-current bear away, and what is the further destiny of these form-elements when they fall upon a neutral medium or one adapted to their development? In what manner do these elements modify the action of this medium?*

"To decide the first and second questions, fresh cholera discharges were given to healthy dogs, and to others in which an artificial catarrh of the stomach and intestines had been excited by the administration of croton-oil, sulphate of copper, etc. *Both dogs were made sick, with frequent vomiting and diarrhea; but while the previously healthy animals recovered in three or four days, those in which a catarrh had been excited died the day following.*

"To determine the third question, rabbits were placed under a bell-glass and exposed to air which had become impregnated as desired from either cholera discharges, disinfected or not disinfected, diarrheal discharges, or putrefying fluids. Two rabbits, in one of which a bronchial catarrh had been produced by inhalations of ammonia, were exposed for twenty-four hours to air from cholera discharges not disinfected. *On the third day following violent purging set in, and both animals became soon cold and collapsed. The one in which a bronchial catarrh had been excited died first, and the other five hours later. A rabbit exposed for twenty-four hours to air from disinfected cholera discharges remained well; another exposed for an equal length of time to atmosphere im-*

pregnated from simple diarrhea stools escaped uninjured; while another which remained for twenty-four hours in atmosphere contaminated from putrid fluids, though at first made insensible, afterward recovered without harm.

“As to the fourth point, cholera discharges were injected into the jugular veins of dogs and guinea-pigs; the discharges in one case having first been freed from their form-elements by thorough filtration and in the other not. *The effect in both instances was the same.*

“To determine the final points, a current of air was made to pass through fresh cholera discharges, both disinfected with carbolic acid and not disinfected, and then conducted through two separate vessels, which contained, respectively, an indifferent fluid-medium, and one adapted to the support and development of any living forms which the current should bring to it. The two fluids used were distilled water and the fluid of Cohn. In a short time, in the fluids communicating with the undisinfected discharges, a considerable number of form-elements had accumulated, which proved to be almost exclusively the bacteria which are usually found in putrid animal fluids. In twelve hours Cohn’s fluid had become clouded and milky; in twenty-four hours it was covered with a thick bluish-green fungous slime, and emitted a foul odor. The distilled water remained clear. *Both these fluids, when injected into the veins of dogs and rabbits, caused the same symptoms as after injection of the cholera discharges themselves.* This was also true of the fluid of Cohn after its fungous elements had been quite removed by filtration, showing that these elements are at least not the only source of infection. Similar experiments with discharges which had been disinfected with carbolic acid showed that the organisms which the air-current brought to Cohn’s fluid were incapable of propagation. Upon injection of the distilled water and fluid of Cohn, after previous disinfection of the discharges by carbolic acid, only symptoms of carbolic-acid poisoning were manifested.”

LEBANON, KY.

SIX CASES OF ALBUMINURIA—THREE RECOVERIES, THREE DEATHS.

BY GEORGE N. MONETTE, M. D.,

Visiting Physician to the Charity Hospital, New Orleans.

During the winter of 1872-3 several cases of albuminuria came in for treatment, with the following results, viz.:

CASE I. S. T. W., aged twenty-eight years, a resident of one of the interior parishes, exposed to all the vicissitudes

of the country, suffered from albuminuria two weeks prior to admission into my ward. He had grave symptoms; namely, general anasarca, anorexia, palpitation of the heart, and excessive prostration. I ordered twenty-drop doses of tincture ferri chloridi and tincture digitalis, each to be repeated every three hours. His diet consisted of milk, eggs, and stimulants. Twenty-drop doses of aromatic sulphuric acid were substituted after the paroxysmal dyspnoea was alleviated. He was discharged cured after about three week's treatment.

CASE II. S. D., aged thirty-nine years, was admitted with same symptoms and additional complications of great gravity. Right pneumo-hydrothorax and ascites existed. Paracentesis thorasis was performed three times. An ordinary tin wash-basin full of fluid was withdrawn each time. This patient wore the aspect of a case of leucocythæmia. Upon post-mortem examination the right lung was found to be densely carnified; the left was distended by hypostatic congestion from long-continued lateral recumbency. The heart was flabby and dilated, and filled with fibrinous coagula. There were some diffused peritoneal adhesions, also pleuritic adhesions in affected thoracic cavity. The liver was of a slate color (*malarial*), with Glisson's capsule thickened greatly, with abundant granulations.

CASE III. T. W., aged twenty-nine years, admitted with a similar complication as Case II, save pneumo-hydrothorax. Paracentesis abdominis was performed three times prior to his death, removing from one to three gallons at each tapping.

CASE IV. Ah Joy, a Chinaman, aged twenty-three years, admitted with usual symptoms of albuminuria. He had been at work on a rice plantation below the city. He died two weeks after admission.

The remaining two cases, which were cured, suffered from ordinary albuminuric symptoms, upon admission, of a malarial origin. Their treatment consisted of iron, quinine, cod-liver

oil, and stimulants. Eggs and milk and farinaceous articles of diet were freely used. The roller bandage was constantly applied to the lower extremities to relieve œdema, which was extremely painful from active distension in each of the cases.

NEW ORLEANS.

CASES OF CEREBRO-SPINAL MENINGITIS.

Dr. Rawlings Young, of Corinth, Miss., communicates the following cases:

CASE I. J. P., aged fourteen years, was attacked about 5:30 P. M., March 17th, with headache and chill, followed by vomiting. At 10 P. M. he was comatose, pupils insensible to light and dilated, head hot, tongue white and flabby, temperature normal. Stimulants and quinine, mercurial purgative, hot foot-bath, sinapism to the spine, cold to the head.

Next morning reaction had occurred. Patient complains of pain in head and neck; has rigidity of cervical muscles, great muscular soreness, general hyperæsthesia of the surface, slight delirium; pulse 130; temperature 102.5°; pupils contracted; has perfect control over discharges from rectum and bladder; dullness on percussing the left lateral region of the chest. Directed sinapism to chest, quinine, bromide of potassium, and camphor-water.

Next day symptoms were not materially changed, save the occurrence of rust-colored sputa. Shaved the occiput and applied a blister, and gave an expectorant; pulse 130; temperature 102°. On the 20th tongue covered with a brown fur, sordes on the teeth, face suffused and purplish, ecchymoses on chest and fore-arms. On the 21st less delirious and some desire for food. On the 22d still less delirium; pneumonia better; pulse 127; temperature 101°.

By the 26th there was a gradual improvement in all his symptoms. In ten days he was able to sit up. It was more than a month before he was entirely well.

CASE II. March 22d B. J., fourteen years old, had a chill at 2 P. M.; at 4 P. M. was cold to the knees, almost pulseless, insensible. Treatment same as that of the preceding case when first seen.

Next morning reaction had occurred. Pulse 130; temperature 102.5°; great dilatation of pupils; boisterous delirium; head drawn back and hot; face flushed; left arm extended and fixed; cervical muscles rigid. Gave bromide of potassium, calomel, and Dover's powder, and applied chloroform liniment to the spine and cold to the head. At 2 P. M. had a cold stage as on the previous day, but it did not occur on the next.

March 25th: Pulse 127; temperature 102°; noisy delirium; tongue dry, cracked, and brown; sordes on the teeth; sudamina on throat and chest; a few ecchymoses on fore-arms and inside of thighs. Castor-oil, diaphoretics, bromide of potassium, and chloroform liniment to spine and left arm. Next day a blister to occiput and upper part of spine. On the 28th in some respects his condition was better; he was more rational and his expression better. From this on for about sixty days no important change. He took food, had evacuations from the bladder in a sort of automatic way; pulse in the morning 120, temperature 101°; in the evening the pulse was 125 to 130, temperature 102° to 102.5°; the arm and spine remained rigid. Alteratives, tonics, blisters, etc., were used with little or no perceptible benefit. He was frightfully emaciated.

After the second month he commenced gradually improving, though this tedious convalescence has been interrupted by a brief attack of dysentery and one or two attacks of intermittent fever; and now, after the expiration of five months, he is able to sit up three or four hours and to ride a short

distance on horseback. The rigidity is gone from spine and arm; senses and intellect unimpaired.

CASE III. A stout, fleshy negress, forty-six years old, was seen at 7 A. M. on the 3d of April, two or three hours after the commencement of illness. She had pain in the occiput, extending down the spine and to the uterus; she was restless and half delirious; pupils dilated; tongue white and flabby; pulse 65; temperature 98°; some hyperæsthesia of the surface, but no muscular rigidity; bowels confined. Quinine and bromide of potassium, stimulating foot-bath, sinapism to spine and abdomen. Drew off a quart of urine with the catheter, and directed an enema.

The next day she was less restless; pulse 64; temperature 97.5°; urinary retention still; head retracted. Continued the bromide and quinine, and applied a blister to the occiput. On the 5th and 6th of April her temperature and pulse were the same as above, but her stupor deepened into coma, and she died on the morning of the 6th.

CASE IV. On the 14th of April I saw a negress, twelve years of age, who had been sick two days. She first had pains in the head and neck, then chill and fever, with nausea and vomiting of greenish fluid. Pulse 132; temperature 103°; tongue dry and brown; she is moaning with pain; restless; does not speak rationally; some stiffness of neck; pupils contracted; eyes turned outward; fæces passed involuntarily; bladder enormously distended; has not slept for forty-eight hours.

In addition to therapeutic means pursued in previous cases, after emptying the bladder of a large amount of offensive urine, I directed one fourth of a grain of sulphate of morphia to be given every two hours until she slept. The next morning she was somewhat better; pulse 128; temperature 102.5°; had slept for six or eight hours. She had a blister to the occiput. Her inability to pass urine continued until the 17th; on the 18th some return of appetite; by the 19th she

had become rational, and from the 20th there was a steady improvement in every respect, and in a few days was able to walk. She recovered with no injury remaining to her senses or mind.

CASE V. A boy, nine years old, was first seen April 22d, twenty-four hours after having been attacked with rigors, fever, headache, nausea, and vomiting. Found him delirious; high fever; neck stiff; pupils contracted; right arm flexed; passes urine and fæces involuntarily; he screamed with pain on attempting to raise his head from the pillow. A cathartic had been administered, and I gave bromide of potassium and camphor-water and a diaphoretic.

Next day still delirious; pulse 135; temperature 103° ; had not slept. Gave chloral, ordered warm bath and cold to the head, chloroform liniment to the spine, and continued treatment of previous day. No change in his condition on the 24th. On the morning of the 25th found he had slept a little at short intervals, but no improvement. In the afternoon he became completely insensible; pulseless; cool; moist skin; cold extremities; breathing slow and labored. Hot bath; stimulants; wet cups to spine. Reaction slowly came on, and in ten hours he had fever. Next morning I gave quinine, and also morphine at intervals until he slept, and then succeeded in securing seven hours' rest.

No important change occurred until the 29th, when some improvement was observed. This improvement was still more decided by the 2d of May, and by the 4th convalescence was fairly established. In about a month from the commencement of the attack he was able to walk, but there was still some contraction of the flexors of the right arm, and he had a shuffling, unsteady gait for two months. He is now entirely well.

CASE VI. Miss M. B., twenty-two years old, stout and fleshy, was attacked on the 7th of May with pain in head, neck, and spine, shivering, nausea, and vomiting, and then

high fever. Next morning completely insensible; pulse 70, weak and irregular; temperature normal; head hot; skin cool and moist; neck stiff; head drawn back; tongue white and flabby; pupils contracted; difficult deglutition; bowels constipated; urine retained. Treatment same as of preceding case, with the addition of hot foot-baths, sinapism to spine, cold to head. Next day wildly delirious; tries to get out of bed, or lies prone with upper part of trunk supported on flexed fore-arms; tongue brown and dry; sordes on teeth. Treatment continued; directed morphia until she slept. On the 12th she was better, and in a month she was well, all her faculties being unimpaired.

[In a note Dr. Young writes: "Of the value of opium in some forms in this disease I have not a doubt. It allays the pain, quiets the restlessness, and procures a quiet sleep not caused by other remedies. Called to treat this disease, I should give without fear morphia in full doses until the desired effect is produced."]

Dr. J. W. Whitmore, of Corinth, Miss., communicates the following case of cerebro-spinal meningitis:

May 17th J. D., a colored man, nineteen years old, robust and healthy, weighing one hundred and seventy-five pounds, went into the field in the afternoon, after riding six miles, to hoe cotton. He soon began to suffer with pain in the back of the head, and in half an hour was unable to walk to the house, a hundred yards distant. At five o'clock next morning I found him, after a night of restless delirium, rolling and tossing on the bed; discharges from his bowels frequent, involuntary, and offensive; slight contraction of the muscles of the neck and spine; respiration irregular; pulse 142, soft and compressible; skin moist and hot; pupils dilated and conjunctivæ injected; he could not swallow even fluids. Hot-water blister to the spine, cold to the head; a half drachm each of chloroform and of laudanum in starch-water by the

rectum. He died at 11 A. M., six hours from when I first saw him, and eighteen hours from the commencement of the attack.

Dr. H. Plummer, of Eldorado, Ky., furnishes the two following cases:

CASE I. J. L.W., a stout, healthy farmer, twenty-four years old, at 3 A. M. had a chill, followed by violent pains in the legs and some pain in the head, though he had retired the previous evening in usual health. At 1 P. M. Dr. Lapsley saw him, and found him still suffering with pains in the limbs; at times was delirious; pulse 120. No urine having been passed since the night before, an effort was made to introduce the catheter, but it failed because of spasmodic stricture at the neck of the bladder. One dose of calomel and rhubarb and sweet spirits of niter every three hours.

In the absence of Dr. Lapsley I saw him at 7 P. M. The cathartic had acted and he had urinated. His pulse was 130, feeble and thready; perspiring freely; intense thirst; great restlessness and muttering delirium; could be roused with great difficulty, and then would relapse into a stupor. His extremities were cold, and there were purpuric spots on the feet and legs. These spots in a short time were all over the body and the limbs. At first they seemed like the eruption of measles, some of them like flea-bites; but in a few minutes they became darker, looking like stains of ink under the skin, and also larger, so that at the time of his death some were as large as a silver half-dollar.

In a short time, Dr. L. having arrived, we gave him quinine and whisky, used a hot bath, and resorted to external stimulants; but he continued to sink rapidly, and died at twelve o'clock that night, less than twenty-four hours from the first manifestation of the disease.

This young man resided on the bank of Salt River, but it had been and is now a very healthful locality. There had

been neither miasmatic fever nor cerebro-spinal meningitis in that immediate locality, nor has there been either since.

In the very interesting report in the *American Practitioner* for August, 1872, by Dr. Reeve, of an epidemic of cerebro-spinal meningitis, the author gives a mortality of fifty per cent, which seems to me exceedingly small. Nevertheless, while this may be the true percentage in the epidemic form of the disease, I think that in the sporadic it will go to seventy-five or perhaps ninety per cent. My experience is that almost all the sporadic cases die.

CASE II. February 4, 1867, I was called to see Mrs. F., a widow, forty-eight years old, who had lost a son the day before from cerebro-spinal meningitis. She was chilly and somewhat drowsy; pulse 85; tongue slightly coated. Gave her a cathartic. Next morning found that the medicine had acted, but she was no better; talked wildly, but would answer questions rationally. During her illness her symptoms would vary greatly in a few hours. At one time she seemed much better, her secretions in a good condition; and upon my next visit I might find the skin dry, kidneys failing to act, tongue like that of typhoid fever.

During her illness purpuric spots appeared on various parts of her limbs and body. Some of these were about two inches in length and rather more than an inch broad. As she recovered—this recovery commencing fifteen days after the beginning of the disease—the cuticle peeled off from these spots, leaving the surface very tender. The treatment was repeated blisters upon the neck and spine, quinine and Dover's powder, and an occasional mercurial; diuretics every few days; in general, meeting indications as they occurred, and was thus compelled to vary therapeutic means from time to time, though the above were most constantly used. She was entirely unconscious of all that transpired during her fifteen days' illness.

Reviews.

An Essay on the Principles of Mental Hygiene. By D. A. GORTON, M. D. Philadelphia: J. B. Lippincott & Co. 1873.

It is of evil augury for a book that it begins with an exhibition of ignorance. No matter whether the ignorance relates to the subject-matter of the book or not, it creates a distrust in the mind of the reader as to the general competency of the author. The essay before us opens with a blunder. The author adopts for his motto the familiar line in which Juvenal reckons among the blessings to be prayed for *mens sana in corpore sano*, and credits it to Horace. It is a mere literary blunder, and we can easily believe that a writer entirely ignorant of the Latin classics might produce an instructive work on mental hygiene; but in the case before us we regret to say that the title-page is a fair index to the character of the volume. It is introduced by an incorrect quotation, and concludes with something which reads very much like a defense of free-love. The essay indeed is a compound of truth and error, of striking facts and false conclusions, of sound suggestions and absurd, extravagant fancies, in which it is difficult to determine whether the good or the evil preponderates. It contains enough substantial truth to commend it to the regard of its readers; but the truth is so mixed up with error that it loses nearly all its force, and the feeling with which we lay it down is one rather of disgust than of satisfaction. The dead flies are small in bulk compared with the box of ointment, but they are numerous enough to spoil a much larger mass than Dr. Gorton has composed in his little work.

While candor constrains us to say all this, the wish is far from us to discourage the author of this essay. We hope he will be encouraged to prepare a new edition of it, in which the blemishes by which it is disfigured will not again appear. He need not be at the trouble to inform his readers what was the standing of Sir Isaac Newton and Dr. Samuel Johnson as men of mind; nor will it be necessary to do more than refer to a poem so universally read as Pope's universal prayer. It is in bad taste, to say the least of it, in enumerating men born in happy wedlock to class the Savior of the world with Solon, Lincoln, and Greeley. "The Solons, Jesuses, Lincolns, Greeleys!" Dr. Gorton has probably but a faint idea of the disgust that will be excited in serious minds by such a sentence as this. If he should be called upon for another edition of his essay, he would do well to avoid altogether the subject of theology, which, as he mingles it with his science, makes a very distasteful mixture. And finally, he must revise his chapter on marriage, and strike out all the sentiments that seem to favor the search of "moral endowment outside the confines of a merely formal wedlock." As his book now stands, our impression is that it is calculated to do more harm than good.

Sex in Education, or a Fair Chance for the Girls. By EDWARD H. CLARKE, M. D., Member of the Massachusetts Medical Society, Fellow of the American Academy of Arts and Sciences, etc. Boston: James R. Osgood & Co. 1873.

Plato said wisely that there can be nothing better in a state than that both women and men be rendered the very best. To this end are directed the efforts of parents who are properly concerned about the welfare of their offspring; and it is the province of education, which in its widest sense embraces hygiene, to bring about this result. But as the theories re-

specting education are numberless, so the utmost diversity of opinion prevails as to the best mode of developing the female mind in connection with her sexual peculiarities, and Dr. Clarke in the little work before us has brought into the controversy questions both for physiologists and strong-minded women. To the former he may appear to have stated his positions somewhat too strongly, and to the latter he will seem to have narrowed down the arena upon which it is the privilege of women to compete with the sterner sex. If he has insisted too much upon the peculiar functions of the female as influencing her education, so far from any evil resulting from it, the exaggeration will have the effect of drawing more earnestly the attention of educators to the mischief which may be done to the health of girls by a perpetual strain upon their nervous systems. This is the aim of this most interesting little volume, in which the author has maintained the dignity of science, while he has produced a work as acceptable to the general as to the professional reader.

The doctrine of Dr. Clarke's book is, that a man should be educated for manhood and a woman for womanhood. That our girls are not wisely educated is shown by the fact that as a class they are more delicate than the girls of European countries, and are physically inferior to our young men. There must therefore be a vice in our educational system which calls for reform. It is found, our author thinks, in the neglect of the peculiarities of a woman's organization. The system of our schools fosters this neglect. The education of the sexes is substantially the same as to the mind, while the physical education of girls is overlooked or misdirected. Boys mingle active bodily exercise with their studies; girls are habitually sedentary. Boys of slower development than girls continue their studies long after reaching maturity; girls prosecute their studies with greatest assiduity at the most critical age, when their physical frames are acquiring full development, and generally cease to study soon after reaching

womanhood. Boys may apply their minds to study equally well at all times; but there are days in every month of a girl's life when the brain ought not to be taxed. During the catamenial period severe effort of body or mind is hurtful. This is the leading idea of Dr. Clarke's book, and it is illustrated with an amount of learning which renders it one of the most attractive volumes we have met with for a long time. It has grown out of an essay which the author read a year ago to the New England Women's Club in Boston, and is sure to find hosts of readers out of the profession as well as in it.

Expert Testimony. By THAD. M. STEVENS, M. D. Pamphlet.

The author of this paper, which originally appeared in the Indiana Journal of Medicine of October, 1873, undertakes to elucidate and explain the subject of "expert testimony," more especially in reference to cases of toxicology. To some of his positions we give our cordial assent; as, for example, where he enforces the necessity of a thorough qualification, both theoretical and practical, on the part of the "expert." He remarks: "Those are called to testify who ought not to be permitted to enter the witness-stand; some who are so ignorant that among their fellows their opinions amount to nothing, but who are *legally* as good as the most learned and scientific." This is truly a most serious fault in our system of jurisprudence in relation to expert witnesses, and one which can not fail to impede the course of justice.

Among "some notorious examples of the incompetency of medical testimony" the author cites the evidence in the well-known case of Dr. Schoppe, who was twice tried at Carlisle, Pa., for the alleged poisoning of Miss Steinnecke with prussic acid and morphia. But he is in error here in supposing that the "incompetent" testimony was exclusively

medical, such as that of the remarkable doctor who made the famous experiment with the chicken-hawk, and that it was wholly "outside of the chemical analysis," and that "it was not so much the fault of the chemical experts that mistakes and false impressions were made." From our own knowledge of these trials, confirmed by their printed reports, it is abundantly evident that it was to the very defective and inconclusive work of the *chemist* employed to make the analysis that the "mistakes and false impressions" were chiefly to be ascribed. It appears in the reports of the trials that the analyst, in searching for the suspected prussic acid, committed a signal blunder in his method of extracting it from the stomach of the deceased. He distilled this, together with its contents, *along with sulphuric acid*; a method which put it quite out of his power to say whether there had been any *free* prussic acid in the stomach or not, since the "slight traces" alleged to have been discovered might very properly be ascribed to the decomposition of the *sulpho-cyanide* of the saliva that might happen to be in the stomach at the time. Both Periera, in his *Materia Medica*, and Wharton and Stillé's *Medical Jurisprudence* sustain this position.

Further than this, when this same chemist came to apply his tests to the liquid thus obtained by distillation, it appears that he only employed *two* out of several recognized reagents. He altogether omitted one of the most important and reliable tests, that of *nitrate of silver*. In fact, so faulty and inconclusive was this analysis considered that the commonwealth abandoned the charge of prussic-acid poisoning, and fell back upon the wonderful "chicken-hawk" doctor's theory of a *compound* poisoning by prussic acid and *morphia*! No morphia, however, was found by the chemist. We have good reason therefore for believing that it was "the fault" of the "chemical expert" who made the analysis quite as much as the "incompetent testimony" of the funny doctor that was used with such effective power by the defense in

the Schoppe case, and which very properly resulted in the acquittal of the prisoner, inasmuch as it displayed a *material* lack of evidence of his guilt.

Our author then gives an example of what he terms a "discrepancy of opinion and statement among *real* experts," citing the celebrated Wharton-Ketchum case, and quoting from Dr. Williams's reply to Prof. Reese's "review" of the trial. In order to make it clear to his readers he tabulates certain results of "Prof. Aikin's analysis" alongside of certain results of "Prof. McCulloch's experiment." (The object of the latter was to demonstrate that the sulphureted-hydrogen test for antimony, *unless pure*, might be imitated in many points by certain complex organic mixtures.) In summing up the alleged "differences" between the two tables, the author says "the only point of resemblance to the proper action of antimony under the same circumstances was the cloud produced when the first precipitate dissolved in hydrochloric acid was cast into water."

Now we can not regard this as giving a fair or correct statement of the point at issue. Of course we do not mean to imply that Dr. Stevens has erred *intentionally* in the matter; but as we have carefully examined the "authorized version"—*i. e.*, the printed report of the trial—we prefer referring to *this* rather than to Dr. Williams's pamphlet. What then do we find in the *report*? On page 79 Prof. McCulloch, in his evidence, referring to his experiment upon a mixture resembling the contents of General Ketchum's stomach, states: "I obtained a red precipitate closely resembling such a one as antimony would give when thus mixed with animal matter. . . . I have since repeated these experiments on chloral and yellow jessamine, and with similar results." Further on he states that this red precipitate "dissolved in hydrochloric acid as that from antimony does; in other words, the two resemble each other *in this property*."

Now, that Professor McCulloch meant that this language

should imply that *hot* or *boiling* hydrochloric acid (not *cold*, as Dr. Stevens quotes) was used to dissolve the *red precipitate*, precisely as for the antimonial precipitate, we think may reasonably be inferred by reference again to the report. On page 83 he says: "I don't remember that it was hot or cold; it was strong acid." In no place is it stated that the acid was *cold*. Further on (page 96) Prof. Reese, in his evidence, speaking of the above resemblance, mentions that "the *boiling* of this precipitate in hydrochloric acid dissolved it." He then goes on to remark that "the only point of distinction between the two cases is the single fact that the white cloud is soluble in tartaric acid if antimony is present." On page 88 Prof. Reese alludes to another point of resemblance not noticed by Dr. Stevens; viz., the boiling of such a complex organic solution, acidified by muriatic acid, on a strip of bright copper, the latter receives a dark stain or deposit much resembling in appearance the stain produced by antimony under similar circumstances. And more than this, when the strip of copper is dried, rolled up and heated in a reduction-tube, a white, amorphous deposit takes place on the cool portion of the tube, very much as in the case of the copper stained with antimony.

As the gist of this whole matter then we understand Prof. Reese simply to take the ground that in a medico-legal case where life is at stake it is not proper, in the search for antimony or any other metallic poison, for the analyst to rely *exclusively* on the sulphureted-hydrogen test or its sequences, inasmuch as the results thus obtained may be imitated by certain organic substances so closely as at least to throw considerable doubt upon the issue. In all such cases we must agree with the "experts" for the defense in the Wharton-Ketchum trial in insisting that the chemical analysis should be an exhaustive one.

From some observation of the important criminal trials that have occurred lately in our country we are rather dis-

posed to believe that there is really very little difference of opinion among *real* experts, even though they be ranged on opposite sides. The difference seems rather between the *true* expert and those who only *seem* to be such.

The author concludes with some suggestions as to the proper remedy for the evil connected with the employment of incompetent "experts." After alluding to several methods he virtually arrives at the conclusion respecting them, however, that under the present state of things they are all impracticable.

* * *

Report on the Diseases of Indiana for the Year 1872, with a brief outline of the Medical Topography and Climatology of different localities. By GEORGE SUTTON, M. D., of Aurora, Ind., Chairman of the Committee. From the Transactions of the State Medical Society.

This monograph is chiefly composed of replies from physicians in forty-two counties of Indiana to questions, indicated in the title, which were addressed them by Dr. Sutton. An immense amount of labor has been performed by Dr. S. in conducting this correspondence and in condensing and arranging the replies; labor for which he deserves the thanks of the profession, and which, if continued, will be fruitful in good results.

Of course among so many contributions there must be some chaff among the grains of wheat, occasional substitution of opinions for facts, or a little adroit self-glorification or careless writing—at least two of the doctors write of the "horse epidemic"—but most of the contributors are men well known to the profession of the state, and their statements will command implicit confidence.

Among the special reports we have been interested in are those from Dr. Cogley, of Madison, Dr. Moffett, of Rushville, Dr. Lomax, of Marion, and Dr. Hammond, of Monticello.

Dr. Cogley, who gives a brief but interesting statement of a case of severe cerebro-spinal meningitis, which recovered chiefly, if not entirely, from the use of cups, some wet and some dry, to the upper portion of the spine, and the internal administration of gelsemium, states that more than three fourths of all the cases he heard of died. On the other hand, another reporter, but living in another county, treats five cases; four recover, while the fatal one occurred in a subject who had congenital hernia cerebri, and had been exhausted by previous sickness—a success which was most extraordinary, and must have been most gratifying to the practitioner. Nevertheless we believe Dr. Cogley's statistics are much nearer in accord with the general experience of the profession.

Dr. Sutton sums up—for we have not space to make other allusions to individual reports—the facts that these reports reveal, as follows:

“The extensive prevalence of cerebro-spinal meningitis in different localities throughout our state—presenting, however, no evidence that topography had any influence in modifying the severity of the disease; also the prevalence of erysipelas as an epidemic in certain counties, and its connection with puerperal fever; the extensive prevalence of influenza last winter, following immediately after the appearance of the epizootic among the horses. The general prevalence of malarial fevers along the southern border of our state, prevailing in counties that are broken and undulating, while in other portions of the state these diseases were less prevalent than usual. The evidence presented by a number of our physicians that the draining of swamps and wet lands, by removing the local causes of malarial fevers, were converting into healthy localities sections of our state which were once known as being extremely unhealthy. Also the observations presented in the report from White County, that where swamps are extensive and not entirely dried during the dry season malarial fevers in such localities are much more prevalent, and assume a more violent and malignant form; also the facts presented by others that a dry season, completely drying shallow swamps, produces a remarkable exemption from malarial fevers; showing that a dry season may

produce a healthy or unhealthy locality, depending upon its medical topography. Also the observations presented by one of the correspondents that the burning of vegetation in the fall over the dried, swamp, or marsh lands has a tendency to prevent the development in these localities of malarial fevers during the following year. The testimony of a large number of physicians that changes are taking place in the character of our diseases, and that malarial fevers appear to be decreasing, while typhoid fever and diseases of the nervous system are on the increase. We also direct your attention to the fact that but one allusion is made to the prevalence of 'milk sickness'—a disease which thirty years ago would probably have occupied a conspicuous place in a report upon the diseases of the state."

T. P.

A Clinical Manual of Diseases of the Ear. By LAURENCE TURNBULL, M. D. Philadelphia: Lippincott & Co. 1872.

In reviewing a new scientific treatise we should always consider whether we are dealing with an original work, made up of new investigations and researches, or whether it be a mere compilation of the labors of others. While the first should command attention, even though the results obtained may not always bear close scrutiny, the second and the easier of the two should be praised with caution.

Dr. Turnbull's work does not belong to the first category, which embraces such treatises as that of Gruber and Toynbee. The main purpose of the author appears to have been that of presenting to his readers who may not be versed in aural literature a *resumé* of the results obtained by other specialists, and to acquaint them with real progress recently made in this heretofore neglected department of medical science. The labor and time devoted to this laudable purpose should be amply rewarded; but we must confess our surprise that Dr. Turnbull has ventured to make such very copious extracts from the works of Toynbee, Wilde, Clarke, and Hinton, and

has inserted translations of many pages from Gruber's, Politzer's, Moos's, and Kramer's treatises. He does not hesitate, however, to give his opinions, both *pro* and *con*, as to the merits of the views quoted, and evinces a thorough knowledge of the literature of the subject-matter on every page.

The volume is divided into twenty chapters, and opens with an excellent introductory and an able article on congenital defects. Chapter II., treating of the physiology of hearing; Chapter III., on the laws of sound; Chapter XI., on otitis media purulenta, etc.; Chapters XIV. and XVI., on nervous diseases; are noticeably good and exhaustive. The last chapter is a *resumé* of the simplest and most effectual method of treating the more common diseases of the ear, and must be particularly suggestive to the general practitioner.

The book is illustrated by an excellent chromo-lithograph, exhibiting the anatomy of the ear and appendages, and by one hundred and seven very good wood-cuts. The bibliographical list extends from the year 1683 to 1871, and is as complete as possible.

R. C. B.

Charter, Constitution, and By-laws of the Æsculapian Society of the Wabash Valley.

Dr. Ragan, of Neoga, Ill., sends us this pamphlet. The Æsculapian Society is one of the most useful voluntary medical organizations, and ranks among its members several medical gentlemen of more than local fame. We commend to the attention of the profession the two subjoined resolutions, which were adopted by the Society in 1872.

“Resolved, that no member of this society shall receive a student in medicine until he shall have been examined by the board of censors, and has received a certificate of qualification signed by at least three of the board, and countersigned by the secretary of this society.

“Resolved, that students must satisfy the censors by a certificate or diploma from some competent literary school, or by examination, that they possess a good elementary knowledge of the following English branches, viz. : orthography, reading, English grammar, composition, arithmetic, algebra, geometry, plane trigonometry, botany, natural philosophy, inorganic chemistry, and enough Latin to enable them to read, write, or translate correctly any Latin or English prescription given them.”

T. P.

Clinic of the Month.

ON QUININE IN RHEUMATIC FEVERS.—Dr. A. W. Barclay has contributed to the last volume of St. George's Hospital Reports a short paper on this subject, which we wish our space would allow us to publish in full. He first discusses the *alkaline* treatment of rheumatic fever, and remarks that it can not be called curative in the proper sense of the term. He says:

"It may help to shorten the duration of the attack, it may serve to lessen the intensity of the inflammation, it may diminish pain, and it may not unfrequently ward off those more serious consequences which give to rheumatic fever its formidable character as a cause of heart disease. All this it may do, and in my own opinion, and that of many others who have made the experiment, it does actually accomplish, but it does not cure. It does not put an end to the paroxysm as bark puts an end to an attack of ague. It does not eradicate the disease as iodide of potash will eradicate the traces of syphilis; commencing as soon as the system is sufficiently saturated by full doses of the remedy, and continuing until complete recovery takes place, with a progress unbroken as long as the remedy is used, retrograding as soon as it is left off. It does not even expedite the recovery in the marked way in which it is expedited when colchicum is administered in gout in a case not yet blunted to its action. Ere long, I doubt not, sufficient statistical evidence will prove its beneficial action, but as far as I can judge it never can be capable of any logical proof. I think that no one can fairly and impartially test it as a mode of treatment without coming to

the conclusion that it is, on the whole, the best that has been suggested, but that it fails to cure the disease.

"Among the large number of cases of acute rheumatism treated with alkalies, one can not fail to remark that some of them give indications of depression, which can only be explained as the effect of the long-continued use of the remedy; and a question arises whether it is wiser to diminish the dose or risk the evil consequences of the depression, each having a tendency to make the case more protracted. Had we any positive rule by which to measure the quantity of alkali necessary, it would not be so difficult to decide; but there is certainly none such. Various means have been tried to meet cases of this kind. Stimulants avail to a certain extent, but have seemed to me to tend of themselves to keep up the disease, to lengthen its duration, and even to re-excite it after it has subsided. Quinine is that which, on the whole, has answered best in my experience. It is somewhat difficult to define the meaning of the term depression as applied to cases of this kind. The pulse keeps up, there is no delirium, there is no collapse; but there is a general impression conveyed by the symptoms present that the patient is unduly depressed, and it has been observed that in such cases the duration becomes protracted, and convalescence does not set in so quickly.

"It is then that I have given quinine with apparent benefit. One must not wait, as in slighter ailments, for the tongue to clean before its administration. It is given simply to meet this one symptom, because we know that there is worse behind. If the prostration be not removed, delirium will follow, and the case will at once wear a graver aspect. It is true that we do not now look upon delirium as evidence of inflammation within the cranium. The theory that the dura mater, being like the pericardium in physiological characters, must have similar pathological tendencies, has given way before the teaching of actual pathological facts that there is no such

metastasis as used to be assumed; still when present it indicates changes the gravity of which can not be overlooked. The blood can no longer stimulate the brain to the performance of its normal functions, and life is in extreme peril. Hence the importance of tracing such a change at its earliest period, and arresting it before it has reached that stage of development when nothing can be done beyond pouring down large doses of stimulants."

EXCISION OF THE THYROID GLAND.—In the *Edinburgh Medical Journal*, September, 1873, Dr. Patrick Heron Watson describes a method of excising tumors of the thyroid gland, which, besides being original, seems to be of easy execution, and, as far as can be established by two or three cases, devoid of risk. The leading features of Dr. Watson's operation consist in tying the vessels previous to the removal of the tumor, and doing it through the same incision as that by which the gland is extirpated. Dr. W. thus describes the procedure:

"1. The external incision should be very free, extending from the larynx to the notch of the sternum, if the tumor is large and spreads widely in a lateral direction. 2. The vessels, arterial and venous, in the superficial incision should be secured as they are divided, to avoid any obscuration of the parts through oozing going on. 3. The fascia should be as freely opened as the skin. 4. The investing delicate fascial sheath of the thyroid should be left undivided until the mediate ligature of the vessels included in their fine cellular sheath has been effected. This sheathing fascia or cellular capsule of the thyroid gland is only a prolongation of the sheath of these thyroïdal vessels. If the capsule is opened then in pushing aside the soft parts to disclose the outline of the tumor, this delicate sheath is apt to glide off the surface of the thyroid gland; and should this occur the gland may readily be detached from the vessels even with comparatively gentle handling, and thus copious hemorrhage,

difficult of restraint, may be occasioned. 5. After the mediate ligature of the thyroidal vessels in their sheathing cellular envelope, the cellular capsule of the thyroid gland should now be opened by scratching through it in the middle line, and the attachments which still retain the goiter in its position carefully divided by means of curved and blunt-pointed scissors. There should be no tearing away of the gland, no pushing parts aside with any roughness of manipulation. 6. Should bleeding occur, it must be recollected that it must take place within the cellular sheath of the vessel and its prolongation upon the gland in the fashion of an investing capsule, and that if the vessels are to be tied they should be secured along with the cellular sheath. Without this sheath these enlarged trunks will be found so fragile as to risk being cut by the ligature, while any attempt to reach the bleeding mouths will usually be baulked by the infiltration by clot of this cellular envelope."

A CASE OF HEMORRHAGE FROM THE INTERNAL CAROTID ARTERY SUCCESSFULLY TREATED BY LIGATURE.—Prof. Henry B. Sands, M. D., of New York, reports (New York Medical Journal) the following important piece of operative surgery: Having occasion to disarticulate the left half of the lower jaw for malignant scirrhus, situated chiefly on the inner aspect of the ramus and body of the bone near the angle, Dr. S. met copious arterial hemorrhage resulting from the procedure. The hemorrhage being temporarily checked by pressure with the finger, an inch of the external carotid artery and portions of equal length of the digastric muscle and the hypoglossal nerve were observed running through the tumor.

"These parts were necessarily divided and removed, together with the tumor. The external carotid, together with some smaller arterial vessels, having been tied, I was about to close the wound, when free venous bleeding took place from a small opening that I had accidentally made in the

internal jugular vein. After some reflection as to the best course to pursue, I seized the margins of the wound in the vein and applied a lateral ligature, not occluding the caliber of the vessel. The wound was then closed by sutures, except at its middle part, where an opening half an inch long was left for the exit of the ligatures. During the operation it was noticed that the upper part of the common carotid and the internal carotid artery from its origin to the base of the skull were exposed, and could be seen pulsating at the bottom of the wound.

“On the tenth day after the operation, at ten o'clock in the evening, while my partner, Dr. Curtis, was engaged in cleaning the wound, a sudden escape of blood took place both from the external opening and through the mouth. Dr. Curtis at once compressed the common carotid with the left hand, and, ripping open the upper end of the original incision, passed in two fingers of the right hand and made pressure over the line of the internal carotid. The hemorrhage ceased at once, about two ounces of blood having been lost, whose color gave no certain indication of the source of the bleeding. Pressure was successfully maintained until my arrival, at the end of about half an hour. It was then found that one of the upper two fingers covered the bleeding point, which was evidently above the carotid bifurcation, and Dr. Curtis was relieved by my pupil, Mr. Shafter. The ligatures were then examined, and that on the internal jugular vein identified and found to be attached far below the bleeding point. No ligature could be identified as belonging to the external carotid artery. After looking at the ligatures I, without giving ether, prolonged the opening in the neck downward along the anterior edge of the sterno-mastoid muscle, and endeavored to reach the common carotid high up. Owing to the altered condition of the parts, this proved impracticable; so, having divided the omo-hyoid muscle, I exposed the artery just below it, where the tissues were normal, and

passed, without tightening it, a ligature. The common carotid was then compressed between the ligature and the finger, and pressure relaxed upon the bleeding-point. A very vigorous spurt of blood followed, and pressure was resumed.

“An examination of the surface immediately above the seat of hemorrhage revealed a very soft pulsation just beneath the granulations along the line of the internal carotid. The latter vessel I directed Dr. Curtis to dissect while I controlled the bleeding. The internal carotid was exposed by scratching through the condensed tissues with the point of a grooved steel director; a ligature was passed and was immediately tightened, as was just afterward the one encircling the common carotid. I then lifted my finger from the bleeding-point and no gush followed, but a bleeding continuous in character and small in amount. This was easily controlled by pressure just below the opening, and for the first time the exact seat and nature of the latter were completely open to inspection. The blood was found to come from a small, circular, clean-cut ulceration in the side of the internal carotid artery, situated an inch below the upper ligature and the same distance above the upper border of the thyroid cartilage. Through this opening the white and glistening surface of the inner coat of the opposite side of the arterial wall was distinctly visible. After ascertaining the opening to be in the side of the internal carotid, I readily exposed this vessel two or three lines below the opening and applied a ligature, thus cutting off the source of the trifling hemorrhage which had persisted after the tightening of the first two ligatures. This hemorrhage must have been caused by the recurrent circulation through branches springing from the stump of the external carotid. The lower portion of the wound was then closed by a few silk sutures, and the rest lightly filled with dry lint.

“The operation, which lasted about two hours, was wonderfully well borne, the patient making no complaint. He lost altogether, both during the operation and the antecedent

hemorrhage, not more than four or five ounces of blood, and the pulse continued firm throughout. Milk and iced brandy were administered through the night, and the patient obtained sleep without anodynes.

"The subsequent progress of the case was eminently satisfactory. The two ligatures on the internal carotid separated on the ninth day, that of the common carotid on the fourteenth day, and that of the internal jugular vein on the seventeenth day after their application. The upper ligature on the internal carotid had in its noose an offensive white slough of the artery three eighths of an inch long, and another hemorrhage was feared. None occurred, however, and the patient recovered completely without any further unpleasant symptoms.

"*Remarks.* Lesions of the internal carotid are usually so rapidly fatal that no opportunity is afforded for surgical treatment. But even when the surgeon interferes success is not generally attainable, and, so far as I have been able to ascertain, there is only one other example of recovery recorded besides the one herewith reported. This case occurred in 1807 in the practice of Dr. Twitchell, of Keene, N. H., and in many respects it resembled my own. The hemorrhage was secondary, and took place, ten days after a gun-shot injury, while Dr. Twitchell was in the patient's house. He applied a ligature on the cardiac side of the opening in the wall of the internal carotid, but was obliged to check the recurrent hemorrhage by means of a graduated compress, as the opening was in that part of the artery which lies just beneath the base of the skull.

"From various sources I have collected the following instances of hemorrhage from the internal carotid. Some were treated and others were not, while all terminated fatally.

"1. A hunter received a penetrating bullet-wound of the face. Hemorrhage occurred on the third day, after the administration of an emetic. Death took place on the fourth

day, during an attempt to tie the common carotid. At the autopsy the ball was found lying behind this vessel, opposite the bifurcation. The internal carotid showed a longitudinal rent one fourth of an inch in length.

"2. Abernethy tied the common carotid for hemorrhage from a wound of the neck inflicted by a cow's horn. The patient died thirty hours after the operation, with symptoms of hemiplegia. At the post-mortem operation the facial, lingual, superior thyroid, and internal carotid arteries were found torn.

"3. Langenbeck tied the common carotid for hemorrhage from the internal carotid, caused by the ulceration of an epithelial cancer. Death occurred soon after the operation, and an ulcer not larger than the head of a pin was found in the coats of the internal carotid.

"4. A. Smith ligated the common carotid for hemorrhage from the internal carotid, caused by a phagedenic ulcer of the tonsil. The patient died in six hours.

"5. In the 'Medical and Surgical History of the War of the Rebellion' a case is reported in which the common carotid was tied for hemorrhage from the internal carotid, caused by a gun-shot wound. The hemorrhage recurred and carried off the patient.

"6. Baizeau tied the common carotid for hemorrhage from the internal carotid, caused by disease of the ear. The bleeding was not arrested, and proved fatal on the third day. At the autopsy an opening was found in the internal carotid, produced by caries of the walls of the tympanum.

"7. Broca performed an operation like the one last described, and with a fatal result, due to hemorrhage.

"8. Billroth, in a case of hemorrhage from the right ear, due to ulceration of the internal carotid, tied the right common carotid, and a fortnight subsequently the left common carotid. Death from hemorrhage occurred two days after the last operation.

"9. Dupuytren reports the case of a man who received a perforating bullet-wound of the neck at the level of the inferior maxilla. Hemorrhage, which pressure failed to arrest, occurred on the tenth day, and proved fatal on the twelfth day. At the autopsy a wound one half an inch in length was discovered in the internal carotid, two inches above its point of origin.

"10. Heyfelder relates that a soldier received a penetrating wound on the left side of the neck, and died of hemorrhage eight hours after the injury. Ice-bags were the only means employed to check the bleeding. The internal carotid was found to be almost completely divided three and a half lines above its origin.

"11. Beclard states that a traveling charlatan wounded the internal carotid while attempting to excise an enlarged tonsil. The operator fled, and Beclard was summoned just in time to see the patient die from hemorrhage. A wound of the internal carotid was found post mortem.

"In some of the cases above mentioned—namely, those in which the hemorrhage was due to disease of the petrous bone—the application of a ligature on the distal side of the arterial lesion was impossible; and the case that I have reported is the only one, so far as I am aware, in which a lesion of the internal carotid has been treated by the application of a double ligature to the injured vessel, one on the proximal and the other on the distal side of the bleeding-point. The result affords additional evidence of the soundness of the rule laid down by Mr. Guthrie; a rule which is too often neglected, as is shown by the surgical reports of the late civil war, even at the present day. It is not perhaps difficult to explain why a surgical maxim so generally admitted to be binding should be so often disregarded. The application of a double ligature to the bleeding vessel is simple in principle, but generally difficult and sometimes impossible in practice. The deep situation of the bleeding vessel, its relation to other

important parts, and, in cases of secondary hemorrhage, the infiltration of the surrounding textures with inflammatory products, offer serious and sometimes insuperable obstacles to the application of a double ligature near the opening in the arterial walls. In these circumstances the temptation to apply a simple ligature to the main trunk is very great; and experience shows that this operation, either alone or, as in Dr. Twitchell's case, in conjunction with pressure, may sometimes insure the desired result. Yet success in such an operation can never be expected, and the surgeon should in no case perform it except as a last resort, and after an attempt has been fairly made to apply a double ligature according to the rule admitted by nearly every surgical writer as imperative. In the present case it is plainly evident that unless the ligature had been applied above as well as below the bleeding-point death from hemorrhage would have rapidly and inevitably followed, as it was noticed that the simple interruption of the circulation through the common carotid produced no appreciable diminution in the violence of the bleeding, which, however, ceased almost entirely when a ligature was applied to the internal carotid beneath the base of the skull. The slight recurrent hemorrhage still going on was controlled by the third ligature, placed just below the bleeding-point. This ligature I should have applied at first, instead of tying the primitive carotid, had the state of the parts rendered the requisite dissection practicable.

"Finally, it may be interesting to note the success which attended the application of a lateral ligature to the internal jugular vein. In spite of the weight of authority in favor of treating wounds of large veins by the use of a double ligature, completely surrounding the vein above and below the bleeding-point, I am strongly inclined, if the wound be small, to trust to a single ligature, applied laterally, so as to include merely the edges of the wound, and not to interrupt the current of blood through the injured vessel. In case the

wound were of large size, however, I should then regard the complete ligature of the vein as affording the best guarantee of success."

EMULSION OF COD-LIVER OIL.—Willard M. Rice, jr., Pharmacist, offers (in the American Journal of Pharmacy, December, 1873) the following formula for the emulsion, which he thinks is superior to any other:

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|-----------------------------|-------------|
| R. Oleum morrhuæ, | fl. 3 viij; |
| Tragacanth, | 3 j; |
| Sacchar. alb., | 3 iv; . |
| Ol. gaultheriæ, | gtt. lx; |
| Ol. sassafras, | gtt. l; |
| Ol. amygd. amar., | gtt. x; |
| Aquæ, | fl. 3 viij. |

The tragacanth and sugar are to be dissolved in the water and the mucilage strained. In this is to be incorporated first the essential oils and then the cod-liver oil. This makes an elegant-looking emulsion, not too thick, containing fifty per cent of the oil, and of a rather pleasant taste and smell.

COMPARATIVE ADVANTAGES OF ELECTROLYSIS AND GALVANOCAUTERY.—1. The relief of pain of malignant tumors is best accomplished by electrolysis or by external galvanization. Cauterization with the galvano-cautery burners modifies the pain to a certain extent, and in some grave cases may have a more permanent relieving influence than electrolysis or external electrization; but for the great majority of cases of ulcers or tumors, where relief of pain is the leading indication, electrolysis or external galvanization, or both combined, will best accomplish the purpose.

2. Scirrhus of the breast, where there is no ulceration, and external fibroids and goiters are best treated by external electrization and electrolysis.

3. For the treatment of polypi—some other tumors, with

a base of moderate size and accessible, as of the ear, nose, larynx, and uterus—the galvano-cautery is preferable to electrolysis.

4. In cases where large blood-vessels are involved, and there is consequently great liability to hemorrhage, the galvano-cautery is preferable to electrolysis. Moderate hemorrhage can be easily controlled by electrolysis, especially by the positive pole.

5. Erectile tumors, superficial and subcutaneous, epithelial and encephaloid cancers in all accessible locations, may be treated with more or less success by either electrolysis or galvano-cautery, or by both combined. We are inclined to the belief that the results of a combination of the two methods would be more permanent in many cases than when only one is employed. To establish this opinion by clinical experience will require time and careful observation. (Beard and Rockwell's Clinical Researches in Electro-Surgery.)

ELECTRIC CAUTERY IN UTERINE SURGERY.—Dr. J. Byrne, of New York, in his recent work on this subject, submits the following aphorisms pertinent to the operative procedures in use:

“1. In all cases of induration, destructive ulceration, and outgrowths of the cervix uteri of a malignant nature, or believed to be so, and therefore warranting excision by galvano-cautery or other means, such operations should never be limited to the apparent line of demarkation between sound and healthy tissue, but must include the whole vaginal cervix at least, and even more if need be. 2. When the shape of a part to be excised is such that a loop can not be made to embrace it, a circular furrow for the reception of the wire may first be made by the cautery knife. 3. The wire loop, knife, or other instrument should never be brought to a white heat when passing through superficial tissues or cellular growths. 4. Traction on the part to be excised should

be carefully avoided until the wire has passed well into the submucous structures. 5. The contraction of the loop should in all cases be very slow and gradual, *yet interrupted*, so as to insure a thorough cauterization of each stratum as passed through. 6. Toward the close of such operations, and as the circle of wire becomes small, let the amount of electricity be proportionately lessened. 7. Apply the knife to the spot intended to be cut *before heating*, and, if possible, be always provided with a duplicate of this little instrument. 8. Shun the use of persulphate of iron as a utero-vaginal styptic dressing when possible; and, should any such agent be needed, substitute solutions of alum or acetic acid, dilute or strong, as circumstances may warrant."

RULES FOR THE EMPLOYMENT OF CUBEBS IN DIPHTHERITIC PHARYNGITIS.—1. Always use recently-prepared, finely-powdered cubebs, suspended in a liquid. 2. Administer it as soon as possible, and even at the commencement of the disease, if the affection is recognized. 3. Always give it in large doses—the medicine never having caused the slightest accident—from twelve to thirty grammes in twenty-four hours, according to the age of patient. 4. Continue the use of the remedy for several days after the disappearance of the false membranes, until there is no further probability of a relapse (generally for three or four days). 5. Recommence the use of the remedy immediately, and continue it with perseverance, at the least re-appearance of the membranes. 6. Always combine with this remedy a tonic and building-up regimen (beef-tea, roasted meats, good wine, cinchonated wine, and, in certain cases, iron).

This is the method of treatment adopted by Dr. Courcelle (*Journal Méd. de la Mayenne*). This practitioner has entirely abandoned cauterization, which M. Trideau very properly calls a barbarous procedure. He considers insufflations of tannin and detersive gargles as simple adjuvants, useful in certain

very rare cases. M. Courcelle prefers the following: R. Fresh finely-powdered cubebs, twelve to thirty grammes; Malaga wine, water, and syrup of orange-peel, āā sixty grammes; to be taken during twenty hours. (New York Med. Jour.)

ON THE ELASTIC LIGATURE.—Prof. Dittel (*Allgem. Wien. Med. Zeit.*) thus describes his most recent mode of using the elastic ligature:

“I have now so modified my procedure that I can secure the operative results as certainly as with the knife itself. The thing is very simple. I divide the operation into two periods. Say that I have a tumor of the breast to remove. Exactly as formerly I conduct the elastic ligature behind and around the tumor by means of the curved needle, but now I only tie the lower ligature. When this has separated things are exactly as if I had executed with a knife the lower half of an elliptical excision. I am now able to see and feel whether I have left any thing behind; and if this is the case, I can remedy the defect either by applying another ligature or by including what has been left within the upper ligature. If the first ligature has fallen, and the surface of the wound has been examined, I then occupy myself again with the tumor, carrying the ligature by means of the needle from the middle of the wound upward and behind the tumor, so that it is embraced within the two cords, just as by the old method the entire tumor was. In this manner the operation is as complete as if performed by the knife, lasting several days longer, but causing much less pain.”

Notes and Queries.

PLACENTA PRÆVIA.—Dr. W. W. Cleaver, of Lebanon, Ky., states that in a practice of more than twenty-three years he has met with two cases of *placenta prævia*, and he is satisfied from his experience in these cases that the safety of the patient depends upon prompt delivery; therefore, when the os is sufficiently dilated, he resorts at once to podalic version, or in suitable cases to the forceps. Dr. C.'s cases, briefly given, are as follows:

"*Case 1*—Mrs. M., about thirty years of age, mother of four children, in her fifth pregnancy was taken with violent uterine hemorrhage at 1 P. M. while standing. Position, cold, and astringents were used, and then the tampon. At 9 P. M. I saw her in consultation. The hemorrhage had ceased, and the head engaged in the pelvis. Brandy, ammonia, and the fluid extract of ergot were given, but the patient was very much exhausted and the pains inefficient; and as soon as practicable forceps were applied, and a dead male child at full term delivered. The operation was easily and quickly done. There was no more hemorrhage, but the patient continued to sink in spite of stimulants, exhausted by the previous loss of blood, and died at 4 A. M.

"*Case 2*—Mrs. S., twenty-eight years old, a very robust, plethoric woman, weighing two hundred and twenty-five pounds, mother of a child five years old, was in the seventh month of her second pregnancy; complained of frequent uterine hemorrhages, occurring generally at night when sleeping. I directed a recumbent position, lead, and opium, and these failing, a tampon of cloths wrung out of vinegar and

water. The hemorrhages still continued at intervals for about two months, when I was sent for in haste because of a profuse flow. I found her quite exhausted, the os well dilated, a portion of the placenta presenting, the membranes unruptured. Gave ergot, ruptured the membranes, and introduced my hand. The child was in a transverse position; succeeded in grasping both feet and brought them down, then waited for a few minutes. The uterus began to contract feebly, and I completed the delivery, the entire operation from the first step accomplished in twenty minutes. The placenta was removed; there was no more hemorrhage; the patient made a slow but complete recovery."

INDIA-RUBBER WEB AS A SUBSTITUTE FOR THE TOURNIQUET. Dr. F. B. Schultze, of Grand Tower, Ill., has found in two cases which he narrates an excellent substitute for the tourniquet. The cases are these:

"*Case 1*—A young man working in a steam saw-mill had his hand cut off by the saw an inch above the wrist; the violence with which this injury was done being shown by the fact that the amputated member was thrown a distance of twenty-eight feet! Upon bringing my amputating case, half an hour after the injury was received, I found my tourniquet missing; but having in my pocket some elastic web, such as is used in making braces, I commenced winding it round the arm two inches and a half above the injured part, and continued it up until the circulation was completely controlled, and then fastened it. The flaps were made and the bones sawed with the loss of only a few drops of blood. The bandage was then loosened. In about a minute the arteries commenced bleeding. They were then tied, and the flaps brought together. The ligatures came away on the eighteenth and twentieth days, and the wound was completely healed in thirty days.

"*Case 2*—A boy three years of age got his hand caught

in a straw-cutter, and received seven cuts from the first phalanges to the wrist. As it was quite dark when I saw the patient, I simply wrapped the fore-arm with the india-rubber web, and postponed operating until the next morning. At that time I disarticulated at the wrist, and there was no hemorrhage after the removal of the bandage until I washed the wounded surface with warm water. Ligatures were applied, which came away in twelve days, and the wound was quite healed in seventeen days.

"Since these two cases, both of which occurred in July, 1870, I do not use a tourniquet at all, but the elastic bandage, in amputations. In amputation of the penis the elastic band will be found very useful. Select such band half an inch broad and apply carefully, and there need be scarcely any blood lost in this operation."

FRESENIUS—TENDENCY OF SCIENTIFIC TEACHING IN EUROPE. The following is part of a letter recently received from Dr. T. C. Vannuys, an able and well-known member of the profession of Evansville, who is at Weisbaden, Germany, studying *analytical chemistry*, and whom we hope soon to see called to an important chair in the State University of Indiana:

"In May last I arrived in Germany, since which I have been working in Fresenius's laboratory, except the vacation in September. That month I visited many of the chemical laboratories in Southern Germany and Switzerland. I found that the course of instruction given in this laboratory is much more thorough and extensive than that of any of the others. . . . There is no more noted man in analytical chemistry in Europe than Fresenius. He visits each student every day at his stand, and expects a full account of his work. Each analysis must come within two tenths of a per cent, or it must be repeated. It is astonishing how much work he does every day. Besides lecturing and teaching in the laboratory, he directs the work of his private assistants in general analysis

and in original investigation; he devotes several hours every day in preparing new editions of his works on *Qualitative* and *Quantitative Analysis*, and editing his *Analytical Zeitschrift*. Fresenius is the type of a German philosopher, yet he does not delight in speculating in science. He still adheres to the old theory of chemical combination; he and Kolbe, of Leipzig, being the only chemists of note in Germany since Liebig's death who attack the new. In this connection there is one fact worthy of note perhaps: scientific teaching is constantly becoming more practical, so that a far greater number of students will be found from year to year in those institutions where the most practical courses are given, while fine lectures, with a display of elegant apparatus, have measurably ceased to draw students. This is well illustrated in the Medical Department of the University of Zürich, particularly as to *histology* and *medical chemistry*, and as to *pathology* in Virchow's Pathological Institute of the Berlin University."

HIPPOCRATES REDIVIVUS.—Dr. George W. Balfour recently delivered an address before the Royal College of Surgeons of Edinburgh, in which he draws the following amusing sketch of the great clinicist of Cos:

Dr. Balfour endeavored to picture the astonishment which would be experienced by one of the skin-clad savages who inhabited the shores of the Firth of Forth or the site of this city two thousand years ago could he now be introduced to the changed scene. But his awe-struck amazement would be as nothing compared with the admiring astonishment with which Hippocrates, the father of our art, could we rouse him from his long slumber, would regard the present state of medicine. He pictured him scornfully surveying our paltry architecture as he passed along our streets to the Royal Infirmary, where, after ascending the main staircase, he is conducted into one of the side rooms and courteously received by the attending physician and his clinical clerks,

who—mindful of Mr. Syme's first axiom, never to look surprised at any thing—are politely blind to the scanty raiment of their strange visitor. Warmed by the genial atmosphere around him, feeling himself, as it were, at home amid the sick and their surroundings, conscious of his own personal reputation and of the esteem in which his views and his works were held for many hundred years, the venerable gentleman essays to impart a little clinical instruction in return for the kindness with which he has been received. Attracted by the appearance of some fluid collected in glass jars which he thinks he recognizes, he proceeds to descant on the prognostics to be derived from the appearance of urine. He points out that clouds in the urine are favorable in proportion to the lightness of their color; but that, however light may be that color, the prognosis becomes more unfavorable if the cloud should rise instead of fall, and absolutely unfavorable—a fatal sign—if there is a general turbidity of the urine without any sediment, while a sediment smooth, white, and consistent indicates freedom from danger and a short illness; but if the urine be occasionally clear, the disease will be protracted. . . . Thus pleasantly discoursing on the results of his experience obtained in his own infirmary—the Asclepion of Cos—and delighted at the ease with which his clear and incisive, if somewhat dogmatic, sentences have flowed from lips silent for so many hundred years, Hippocrates glances complacently around upon his audience, and finds that while he has been speaking one of the young men has by boiling some of the urine in a test-tube obtained an opaque, milky-looking fluid, and another a copious brick-red deposit. A little aghast at these peculiar and unexpected results, he wisely says nothing, and when suddenly asked as to what he thought of the comparative merits of picric and nitric acids as tests for albumen, he feigns a little deafness. But the look of helpless imbecility which begins to steal over his face is not lessened when another inquires whether he prefers

Moore's, Trommer's, or Boc Hoher's test for sugar in the urine, or whether he pronounces any other less fallacious; and what he thinks of a milk diet as a curative agent. The words "milk diet" recall the fast-fading color faintly to his cheek, and with one timid glance at the microscope, beneath which one of the clerks has a preparation the nature of which he is anxious to know, poor Hippocrates passes out into the ward, discoursing pleasantly of the virtues of ass's and of cow's milk, of their hurtfulness in fevers, and of their curative virtues in gout and in phthisis. The physician, ignoring his peculiar ideas as to the use of milk in fever, courteously inquires his views as to tubercle, what he thinks of its relation to inflammation generally and to catarrhal pneumonia in particular; and without waiting for his answer shows him a fine specimen of the "cracked-pot" sound, and then hands him a stethoscope that he may listen to a peculiarly good example of bronchophony. The word has a Greek ring about it, and thinking he may understand it better with the instrument in his hand, Hippocrates take it, and, uncertain what to do with it, looks first at it and then through it, considers whether he should listen to it as to the moaning of the sea in a shell, or whether the sound is to be produced by blowing through it as a trumpet; and, utterly bewildered by all he has heard and seen, suddenly recollects an important engagement in Thessaly, and with many thanks returns the wonderful but unknown instrument, and departs a sadder if not a wiser man, fully conscious that if called upon to pass a clinical examination of to-day, he, the greatest clinicist of antiquity, would infallibly be found wanting.

Dr. Balfour went on to say that the first lesson to be learned from this little episode of Hippocrates was the very great advance in scientific accuracy which medicine has made since his day. The second lesson—and a very important one it was—was that the most thorough knowledge of ancient medical lore, and the most perfect acquaintance with the

purest Ionic Greek, were of no practical value to the medical student of the present day. He urged the study of natural philosophy and natural history, more especially of vegetable physiology. He considered chemistry most important, and believed that medicine would assuredly halt until we had a practical chemist attached to all our infirmaries.

INVETERATE PSORIASIS.—Dr. Geiger, in a paper read before the Medical Society of St. Joseph, Missouri—a copy of which he sends us—reports a severe case of general psoriasis of twelve years' standing, which has seemingly been cured by iron, quinine, cod-liver oil, and arsenic. Warm alkaline baths locally gave comfort.

DR. MATTHEW BAILLIE, a nephew and private pupil in anatomy of Dr. Wm. Hunter, was thus addressed, according to the "Gold-headed Cane," by his uncle: "Matthew, do you know any thing of to-day's lecture?" "Yes, sir; I hope I do." "Well, then, demonstrate to me." "I will go and fetch the preparation, sir." "Oh, no, Matthew; if you know the subject really, you will know it whether the preparation be absent or present."

WAS THERE A "BOURBON" AMONG THEM?—Hollinshed's Chronicles, 1577, thus discourses of whisky: "One Theoricus (*Episc. Hermenensis juxta Bononiam*) wrote a proper treatyse of *Aqua Vitæ*, wherein he prayseth it to the ninth degree. He distinguisheth three sort thereof—*simplex*, *composita*, and *perfectissima*. . . . *Byeing moderately taken*, sayeth he, it sloweth age, it strengtheneth youthe, it helpeth digestion, it cutteth fleume, it abandoneth melancholie, it relisheth the harte, it lighteneth the mind, it quickeneth the spirits, it cureth the hydropsie, it healeth the strangury, it poundeth the stone, it repelleth gravel, it puffeth awaie ventositie, it kepyth and preserveth the hed from whyrling, the eyes from

dazelyng, the tongue from lispyng, the mouthe from snafflyng, the teethe from ratlyng, the weasan from stieflyng, the stomache from wamblyng, the harte from swellyng, the bellie from wirtchyng, the guts from rumblyng, the hands from shiveryng, the sinowes from shrinkyng, the veynes from crumplyng, the bones from akyng, the marrow from soaking.
 *And truly it is a soueraigne liquour if it be orderlie taken."*

SIR PHILIP CRAMPTON, besides being one of the most genial of men, was also one of the most splendid-looking. At the king's levee in Dublin, in 1821, he appeared in the uniform of surgeon-general, which was completely military. The king, struck by his noble appearance, said to Lord Newbury, "Fine man! general officer? in what branch of the service?" Norbury, being too much of a courtier to allow that royalty could be mistaken, and too inveterate a punster to omit an opportunity, replied, "May it please your Majesty, that is Crampton, a general in the *Lancers*."

THE AMERICAN PRACTITIONER.

MARCH, 1874.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Communications.

CHOLERA HYGIENE.

BY ELY M'CLELLAN, M. D.,
Assistant Surgeon U. S. A.

Cholera having been demonstrated to be a contagious disease, which is spread by the dejections of individuals suffering from choleraic diarrhea as well as from the developed disease, it becomes a matter of vital importance to inquire what means may be employed to prevent or arrest the development of the disease in any threatened community.

That the occurrence of cholera may be prevented by proper precautions, and that it may be stamped out when once developed, is most certain. To insure this grand result is necessary the concerted action of each and every individual. One careless or indifferent member of a community may not only render negative the wisest precautions, but may endanger the lives of all.*

* Report on Epidemic Cholera, Circular No. 5, Surgeon General's Office, Washington, 1867; The Mecca Pilgrimage and the Cholera, Medical Times and Gazette, April 26, 1873; Prophylaxis of Asiatic Cholera (McCormac), British Medical Journal, August 23, 1873; Progress of Sanitary Science, British Medical Journal, October 25, 1873.

The results obtained by experienced observers demonstrate that the means of prevention against a general epidemic of cholera are :

- I. *Quarantine ;*
- II. *Cleanliness ;*
- III. *Disinfection ;*
- IV. *Individual Habits.*

I. QUARANTINE.—With the subject of quarantine, from the geographic location of the territory to the inhabitants of which these pages are addressed, but little of interest presents itself. Cholera, following the great lines of travel, only reaches the interior of a continent after the note of warning has been sounded from one or other of the ports of entrance. At such points the subject is of vital importance; but the disease having escaped the cordon, and having become domesticated in any community, it behooves all within the lines of travel from that infected point to consider carefully and earnestly such means of prevention as the knowledge which sanitarians possess of the disease has placed at the disposal of the public.

II. CLEANLINESS.—Cleanliness in what? Cleanliness in every thing. To maintain the perfect sanitary condition of a large city trained minds are devoted and thousands of money are lavishly expended; but in the small interior towns, with some few bright exceptions, little or no attention is paid to the subject, each property-holder following the bent of his own mind. In these towns the streets and natural drainage sources are the receptacles of filth. The ground within and around out-houses is the depository of human excrement. The negro in his cabin is permitted to rival the pollutions of Jessore or Madras, while the only scavengers to be found are the hogs that roam the streets. The latter, after devouring indescribable filth, are presently served as articles of food.

To secure the best sanitary condition of a town, it should be the duty of the trustees to appoint an inspector, who should have at his command an efficient corps of laborers. By this inspector all that is detrimental to the public health should be removed.

To what should his attention be directed?

1. *To the condition of each house and its surrounding premises.*—*Débris* of all kinds should be collected in heaps and destroyed by fire. No rank vegetation, which too often conceals pernicious substances, should be allowed to stand, and when cut down should be destroyed by fire. Out-houses of all kinds should be inspected. Privies, stables, chicken-houses, etc., should be cleaned and disinfected. The *débris* should be buried in such position as not to affect the water-supply. Dirty and damp cellars should be cleansed, ventilated, and disinfected.

The water-supply should be rigidly examined, and property-holders required to place their wells and cisterns in good condition. *Débris* should not be permitted to accumulate upon the ground. The well should be securely covered and closed. The sides should be banked up, so that the surface-washings may be from, not to, it.

Despite the theory of Pettenkofer, the action of the soil as a filter surpasses all others, and from a carefully-kept well pure drinking-water may always be obtained. If a privy-vault should be close to a well, or if a house or other drain should pass in its immediate vicinity, the walls of that well should be rigidly and frequently examined, and water taken from the bottom of the well carefully tested, lest contaminating drainage may occur; and all wells so situated that they must inevitably receive impure drainage or surface-washings must be closed in such manner as will absolutely prevent access to their contents. Localities which in a past season had been infected, and where systematic disinfection had not been instituted during the prevalence of the disease, should be most

carefully cleansed. Every portion of the premises upon which cases of cholera had occurred should be reached by the disinfecting agents. It should be borne in mind that it is far more prudent to err from overzealous cautiousness than from negligence.

Individuals arriving in any community from a locality known to be infected should be at least subjected to a close surveillance. If their effects have been so situated that by any possibility they could have become infected, they should be subjected to sufficient disinfection. The individuals should be required to use a carefully-disinfected privy until the uttermost limit which can be placed on the period of the incubation of cholera has been passed. For the efficient disinfection of clothing, etc., no plan proposed exhibits more favorable results than that of Dr. Ransom.* In the use of this hot-air closet it was found that a temperature of 250° F. was effectual in destroying the contagion of small-pox.

A rigid house-to-house system of inspection, once having been established, should never be abandoned. An occasional inspection amounts to nothing. Eternal vigilance is the price of safety.

2. *To the condition of the natural drainage of the town,* water-courses and other natural drains should be kept free and unobstructed, and disinfectants should be constantly used throughout their length. The vegetation which almost invariably lines the streets of small towns and chokes the roadside drains should be removed; and then not left to decay in the center of the road, but should be removed beyond the town limits and there destroyed with fire. Ponds and pools of stagnant water within or near the limits of the town should be filled up; filled up not with the *débris* of the town, but with fresh earth, which is one of the most valuable disinfecting agents.

Cholera having appeared in a town, it is desirable that

* British Medical Journal, September, 1873.

the authorities select an isolated building, which may be used as a hospital. The house selected should be sufficiently commodious to prevent overcrowding, and to admit of the separation of the convalescents from the sick. This building should be placed in the charge of a competent physician, who should be assisted by a corps of nurses, and the hospital should be furnished with all necessary appliances. To this building all cases of cholera which occur should be removed.

A distinguished physician of Nashville has pointed out that in an epidemic of cholera want of proper food and the privations to which the lower classes are always subjected during an extensive epidemic adds fuel to the fire, and his suggestions of immediate relief of their wants is worthy the consideration of all town authorities.

The general cleanliness of a town having been secured, there remains to be noted that of individuals. Scrupulous care of the person secures the removal of what may and often does prove the nucleus of disease. Personal cleanliness is best secured by a daily bath. In the sultry and oppressive weather in which cholera most frequently makes its dread appearance, the bath, as hot as can be borne with comfort, affords the most efficient relief that one can secure. A thorough soaping and rubbing of the body with a flannel cloth removes all effete matter from the skin, and the free use of hot water imparts a cooling freshness, a solace from which none may be debarred; and which, taken in the early morning, invigorates to meet the fatigues of the day, and at night encourages refreshing and strengthening sleep.

The under-garments should be frequently changed, and those which have been worn during the day should invariably be removed on retiring to bed. Clothing that has been worn through the day should never be exposed in the sleeping-apartments during the night-hours, and should be well cleansed and aired before being again used.

Trivial and unnecessary as such rules may seem, the observance of them will be found of incalculable value.

III. DISINFECTION.—What vaccination is to small-pox hygienic regulations are to cholera. The rigid observance of sanitary laws presents to this virulent disease a wall which is almost insurmountable. The foundation of this wall—this line of demarkation between health and disease, between life and death—is undoubtedly laid in disinfectants. If the port of entry is passed by cholera, if the embargo there laid upon the disease has been insufficient to arrest its progress, it behooves each community to raise the wall for their own protection, and it is all the more necessary that the foundations are made sure.

The day has passed in which nauseous-smelling substances are looked upon as disinfectants. "To change the odor is not to disinfect. The odor produced by a putrescent animal mass may be covered, but the effete matter, the product of decomposition, is still present in the air that is breathed, although the nostrils, overpowered, fail to detect its presence." To borrow the words of Dr. Craig, "a true disinfectant must be antiseptic; that is, it must possess the power to destroy or to render inert the products of decomposition of organic matter or of morbid action in the living body through the agency of a reaction in which the disinfectant itself undergoes chemical destruction."* Therefore that agent is the most acceptable and useful which destroys utterly and for all time the effete matter with which it may come in contact.

A study of these agents renders it necessary that some one or other of the classes into which they have been divided should be adopted; but as it is unnecessary in a paper of this character to enter fully into the study, and as we will endeavor to point out those which will be most valuable in

* Report on Disinfectants and their use in connection with Cholera, Circular No. 5, S. G. O., Washington, 1867.

the emergency of which we are treating, we will pass over the complicated classifications of Jeannel and others and adopt that of Dr. Craig.

1. *Destructive disinfectants*, "which act by oxidizing and consuming whatever organic matter they may come in contact with, attacking the more advanced product of putrefaction first."

2. *Conservative disinfectants*, "which destroy effluvia and organic matter when in small quantities, but are inert upon large masses."

The action of the agents which are classed under these grand divisions, and their application, will be considered when treating of the emergencies which demand their use, and those only will be noted that are attainable by all classes of individuals.

Experience has taught us that water, that indispensable element, is a most efficient agent in the diffusion of cholera poison.

The question naturally arises, can water which is contaminated with organic matter be detected, and when detected can it be rendered by any process of purification safe for human use? Facts based upon extended observation demand an affirmative answer. To detect impure water, or water which has been contaminated by organic matter, Rawlinson says:

"If the water from a certain well or tank be placed in a tall glass, covered and exposed to the sun, and after twenty-four hours a drop be examined under the microscope, we find its surface covered with molecular matter and vibriones. We may be almost certain that the organic matter from which these vibriones are formed is capable of inducing cholera, supposing it, of course, to have been derived from cholera ejecta."*

This method of examination is certainly beyond the popular reach. Few individuals are skilled in the use of the microscope. Chemistry, however, affords a simpler means, and one which is within the reach of all.

* Rawlinson "On the Best Method of keeping Water Sweet." Macnamara, op. cit., p. 498.

Place a quantity of the suspected water in a glass vessel, and add, drop by drop, a solution of the permanganate of potash (which may be obtained from any chemist) until a pink color is imparted to the liquid. If after standing a short time the color disappears, it indicates the presence of organic matter. Add again the solution of the permanganate until the color is again produced. If the organic matter has all been decomposed, the water will after the lapse of hours retain the pink color; but if organic matter is still in solution, the color will again disappear. The greater the amount of the salt decolorized before the water retains the pink color, the larger the quantity of organic matter present in the water.

Before proceeding to the subject of the purification of water it is well to examine into the sources from which water for domestic purposes is ordinarily obtained.

In communities not provided with a carefully-delivered water-supply the purest water that can be employed for domestic purposes is that obtained from securely-guarded wells and from cisterns which are supplied with rain-water. They alone can be protected from surface-washings. Cistern-water, however, must be as carefully examined and tested as the well-water. Rain-water, it is well known, may contain organic matter of animal or vegetable origin. Even when it has been collected in a clean glass vessel, before it has come in contact with roof or soil, it has been found to be impure from organic matters, etc., which it has derived from the atmosphere in its passage through it, when taken near inhabited places.

Snow and snow-water is much less pure than rain-water, for the crystals of which it is composed imprison the impurities of the atmosphere; and it is said "that snow frequently contains so much organic matter as to show confervoid vegetation under exposure to light." *

The water of rivers, marshes, ditches, canals, and ponds

* Brande and Taylor's Chemistry, American ed., 1867, p. 138.

is contaminated with organic matter derived from decaying animal and vegetable remains, and from *débris* of all kinds which necessity or surface-washings empties into them. Necessity demands that the water of large rivers shall be employed by the cities and towns upon their banks. In such instances all the aids which science affords are employed in the purification of the fluid before it is distributed for general use. But stagnant water, or the water of nearly dry streams or that of marshes, should never be employed for domestic purposes until it has been deprived of its deleterious constituents.

Spring-water may be contaminated from surface-washings or from organic matter with which the strata of soil through which it passes may be impregnated.*

Impure water may be rendered serviceable and fit for use by boiling, which act precipitates most of the mineral constituents and destroys utterly all molecular matter.

Dr. Taylor, a returned missionary from China, reports that during a residence of many years among the Chinese no cases of cholera came under his observation; and this absence of the disease he attributes to the fact that tea is the beverage of the country; consequently nearly all the water which the inhabitants drink has been boiled.

By the process of filtration water may be thoroughly purified. Indeed so perfectly does the combination of boiling and filtration purify water that it is asserted that water in which cholera discharges have been mixed loses entirely its infecting properties on being subjected to these simple expedients.

Dr. Peters suggests an excellent filter for the poor "in one of the largest-sized common red flower-pots, suspended at a convenient height in a shady place, and having the hole in its base plugged with a sponge, so as to permit only an

* Brande and Taylor's Chemistry, p. 133; A Manual of Practical Hygiene (Parkes), p. 16; A Treatise on Hygiene (Hammond), p. 216.

exceedingly fine stream of water to pass through; the sponge to be frequently washed." Filters containing the black oxide of iron are said to be efficient in removing organic matter from water.

Of such vast importance does this subject become that during an epidemic of cholera in any community each family should be provided with drinking-water only after it has been subjected to some such process. Water so prepared, to which ice is added, is not only harmless but palatable. Ice may be used with impunity, for it is one of the purest forms of water when taken from a deep lake or pond. Faraday demonstrated the fact that water in freezing deposits nearly all of its constituents, and that the unfrozen portions contain the impurities.

Not unfrequently individuals are placed in such positions that they are unable to procure water which has been purified by either boiling or filtration. The permanganate of potash, which has already been noted, now becomes invaluable. The action of this salt is explained by Dr. Craig as follows:

"When the permanganate is added in suitable quantities to impure water it converts the organic matter into carbonic acid, water, etc., undergoing itself a gradual decomposition, with the deposition of insoluble dextoxide of manganese." "A method which will destroy organic matter in water without adding to it any thing unpleasant or injurious is an evident desideratum at all times, and especially during the prevalence of cholera, and there is perhaps no method more effectual and convenient than that by treatment by the permanganate."

The practical application of this agent requires the use of from half a grain to one grain of the salt to the gallon of water, and about two hours are required for its action. In smaller quantities the solution should be added, drop by drop, until the pink color is evident. In a tumblerful of water but a few moments are required for its purification. At some of the Indian stations, where the water was offensive from decaying organic matter, a few drops of the permanganate purified the water almost instantly.

The peroxide of hydrogen, an antozone, is said to be still more efficient in the purification of water. It is a powerful oxidizer, and completely destroys organic matter with which it comes in contact.

The late Ashantee war called forth, among other notes of moment, the invaluable memorandum of Crooks on the purification of drinking-water. This observer demonstrates: 1. That the organic matter in impure water may be divided into three classes: (*a*) Matter in a state of putrefaction; (*b*) Matter ready to become putrid; (*c*) Matter which is slow to decompose. 2. That the permanganate of potash acts powerfully upon organic matter of the first class, but that its power over substances of the remaining classes is not only slow but uncertain. 3. That a mixture—consisting of permanganate of lime, one part; sulphate of alumina, ten parts; fine clay, thirty parts—is the most effectual purification of drinking-water now known.

The use of impure water almost invariably results in the development of diseases of the alimentary mucous membrane, and of specific diseases, such as malarial and typhoid fevers and other affections; but simply impure water will not induce the disease known as cholera. To produce cholera from water it is essential that the *water must have received a portion of the organic matter from the dejecta of an individual who is infected with the disease.*

An unknown traveler infected with cholera may deposit his dejections in such position that the water-supply of a community will become infected. None knew of his arrival; his departure was not noted; therefore when days have passed, and cholera has been developed in persons who have used this contaminated water, the members of the community are at a loss to account for its development; but invariably a prompt and persistent inquiry along the line of infection will result in the detection of the individual who has scattered the disease.

It has been shown that privies, cesspools, and sewers, the receptacles of human excrement and of other forms of filth, become hot-beds for the dissemination of the cholera infection, when the dejections of an individual suffering from the disease are mixed with their contents. It has been further shown that the effluvia from such localities is impregnated with decomposing organic matter, and that when inhaled this organic matter becomes mixed with the saliva, is swallowed, and the disease is reproduced.

Experience, that mighty expression of power, has demonstrated that certain agents, classed under the general head of destructive disinfectants, will most effectually destroy this poison. Of these agents we will select but those whose efficiency has been well tested, and whose small cost places them within the reach of all classes—namely, *sulphate of iron, or copperas, lime, and charcoal.*

Each of these agents belongs to the class of destructive disinfectants; each acts promptly and powerfully upon organic matter, and a combination of the three procures a more powerful disinfecting agent for the purposes now under consideration. Dr. H. C. Wood thus describes the disinfecting action of copperas:*

“It is antiseptic, but it also decomposes sulphureted hydrogen, precipitating sulphide of iron. It is decomposed by ammonia; the oxide of iron, a persistent, powerful ozonizing agent, being precipitated. It slowly but persistently attacks organic matter about it, oxidizing it, and being reduced to a sulphide of iron.”

The experiments of Eckstein, made in a privy which was in daily use by a large number of persons, confirmed the value which has been assigned to this agent.

Macnamara† found in cholera dejections which were treated with sulphate of iron the infusoria and molecular action was instantly destroyed and did not recommence. His experiments fully substantiate the statements made by Dr. Budd in 1866, and by Dr. Angus Smith in 1869.

* Phila. Med. Times, July 12, 1873, p. 655.

† Macnamara, op. cit., p. 401.

Lime as a disinfectant is of value from its power of destroying organic matter by the process of oxidation, as well as by its powerful affinity for water. The chloride of lime as a disinfectant is claimed by Eckstein to be equal if not superior to sulphate of iron. Macnamara found, however, that although its presence in a cholera dejection arrested the action going on in the molecular matter for a time, it was very soon resumed. Charcoal acts as a mechanical disinfectant, entangling the organic matter in its meshes.

The most advantageous use which can be made of these agents is as follows: a mass composed of two parts of unslaked lime and one part of charcoal is cast upon the exposed surface of an impure privy or cesspool; upon this is poured after a few hours a solution of sulphate of iron, which has been prepared by adding the salt to boiling water in the proportion of five pounds to the gallon. A sufficient amount of this solution to saturate the mass should be used, and its application should be made daily.

In the consideration of agents which act as disinfectants to human excrement the value of fresh earth must not be overlooked. Its value during the late war in privy sinks, which were daily used by large numbers of men, was fully demonstrated. The practice, which is so universal through the Southwest, of defecating upon the ground and of leaving the excrement uncovered should be rigidly discountenanced, and the use of sinks which may be disinfected should be insisted upon. The modern earth closet, which is simple in its construction and so cheap as to be within the reach of all, should be universally provided for the use of females. Goodell* has shown how many and how serious are the disorders to which the female is liable arising from the miserably faulty closet conveniences which, especially in the country, are provided for their use.

During the prevalence of cholera it is most prudent for

* Philadelphia Medical Times, August, 1873.

those persons living in the immediate vicinity of infected localities to adopt some measures by which the disinfection of the atmosphere may be accomplished. It has been shown by various experiments that during the prevalence of cholera there is an absence of ozone in the air. Ozone is a peculiar element, which is supposed to be oxygen acted upon by electricity. It is characterized when in a concentrated form by a peculiar, pungent odor, "and by its intensely oxidizing and bleaching power, so that substances on which common oxygen produces no effect are rapidly oxidized on contact with air which contains only a small portion of this odorous principle." *

To detect the presence or absence of ozone in the atmosphere, Schönbein, the discoverer of this element, prepared slips of paper, which, having been soaked in distilled water, were placed in a solution of iodide of potassium and starch, in which they were left for five or six hours. They were then dried in a cool, dark place, in the horizontal position, so that the iodide solution might be equally diffused.

The experiment is performed by hanging these papers in a box from which the bottom has been removed. They should not touch or rub against each other, and on being exposed for observation should be moistened with distilled water. If ozone is present in the atmosphere, the slips are rendered blue; if the ozone is deficient, no change of color is produced.

Various other processes have been described by which these papers may be prepared and the presence of ozone determined. Conspicuous among them are the methods of Moffat, Lowe, and Beard.

Although by some authorities the peculiar properties ascribed to ozone are doubted, still the majority of observers describe it as the vital element of the air; "*that from its presence oxygen is life-supporting, and that in the absence*

* Brande and Taylor's Chemistry, p. 110.

of ozone offensive products in the air are increased, and all diseases which show a putrefactive tendency are influenced injuriously." *

Several methods for the artificial production of ozone are described: the slow oxidation of phosphorus, the slow combustion of sulphuric ether. The method of Boeltzer, of adding one part of sulphuric acid to two parts of permanganate of potash, is attainable by all. This mixture will continue to give off ozone for several months.

For the purification or disinfection of the air many other expedients are suggested as of practical value. *Charcoal*, from its rapid absorption and subsequent oxidation of organic emanations. *Chloride of lime*, exposed in a shallow vessel and moistened with water, gives off chlorine, which is supposed to destroy organic matter. *Bromine*—This substance, diluted and exposed in saucers, is a popular aerial disinfectant. *Nitrous acid*—the gas may be evolved by placing a small portion of copper in dilute nitric acid—is a most powerful disinfectant. *Sulphurous acid*, most easily evolved by burning sulphur, is also supposed to act powerfully on organic matter.

It is prudent that during a cholera epidemic one or other of these disinfectants should be exposed in all rooms of houses, especially those used as sleeping-apartments; but if bromine, nitrous, or sulphurous acid be employed, great care should be used that the gas is disengaged slowly.

The theory that flies may become the carriers of cholera poison has been advanced; and as the idea carries with it an air of plausibility, effort should be made to counteract any injurious influence which they may exert. The most scrupulous cleanliness, not only of cooking-utensils and table furniture, but of the rooms in which food is stored or prepared, should be observed. Gauze covers for dishes should be used, and every appliance which may prevent their entrance into houses should be adopted.

* Peters, op. cit., p. 103; Parkes, op. cit., p. 83-85.

The occurrence of a case of cholera in any community should lead to a general and complete disinfection of all points at which the individual may have been during the few days previous to his attack. With the first symptoms of the disease the house in which the patient lies should be put in order. The various vessels and appliances for the sick should be without excitement placed ready at hand. The vessels from which drink and medicine are to be administered should be placed in the room, and not mixed indiscriminately with those in use by the healthy members of the family. A deep but narrow pit should be dug in the yard adjoining the house, in such position that no possible drainage can be established to the water-supply, and the bottom of this pit should be covered with the crystals of the sulphate of iron. A large supply of a saturated solution of copperas should be prepared, and after each vomit or dejection of the patient a quantity of this solution should be added, and the whole intimately mixed. The vessel containing the mixture should be at once carried from the house, its contents emptied into the pit; the vessel should be carefully washed, and the water which has been used for that purpose should be treated as the dejection has been. The mass at the bottom of the pit should now be covered to the depth of two or three inches with fresh earth. This maneuver must be repeated after each use of the vessel.

A tub of water, which has been strongly impregnated with carbolic acid, the addition of which must be made with boiling water, should be in a convenient position, into which all cloths or articles of clothing should be cast as soon as removed from the patient. Should necessity require bathing of any portion of the patient's person, water containing a large per cent of carbolic acid or a solution of the permanganate of potash should be employed, and in a similar fluid the attendants should frequently rinse their hands. When the dejections are passed involuntarily, and the clothing beneath

the patient becomes saturated, carbolic acid or the permanganate should be added.

Should death occur, all clothing which has been on or around the body should be at once removed and instantly thrown into the tub of carbolized water. The body should be washed in one or other of the disinfecting fluids, and all water which has been used on the person or on the clothing must be treated as the dejections have been. Should the mattress be found soiled with the discharges, it should be burned at once. Indeed it would always be more prudent to destroy by fire all fabrics which have been soiled by these fatal dejections than to risk the development of a single new case. The body having been placed in the casket, crystals of sulphate of iron or of permanganate of potash should be placed around it, so as to act upon any product of decomposition which may occur prior to burial, which in no case should be delayed.

It is prudent and well for the healthy occupants of a house in which cholera has become developed to at once subject themselves to some prophylactic treatment. Experience seems to indicate that an acid mixture containing quinine and iron is most efficient. Should a second case occur, at its termination the house should be abandoned, at least until a most careful system of disinfection shall have been instituted.

IV. INDIVIDUAL HABITS.—Niemeyer,* writing in 1870, says:

“Certain influences appear to increase the predisposition to the severer forms of the disease, or to diminish the resisting power of the organism to the action of the poison. Chief among these are errors of diet, emetics, and laxatives, catching cold, and other debilitating influences. It is true, foolish people seek to excuse their excesses at the time of cholera epidemics by saying that the mode of living can have no effect in inducing cholera, because persons who lead the most proper lives are attacked by and die of the severest forms of the disease.

Op. cit., p. 647.

Whoever is exposed to a poison whose action kills many persons, while others recover from it, is foolish to subject himself to injurious influences which lessen his chances of recovery, even if the avoidance of these injurious influences gives no guaranty of a favorable termination."

We have quoted the remarks of Niemeyer in full, so applicable are they to a class in every community who find in times of public danger only fresh and additional excuses for self-indulgence.

It is related by a prominent physician of Paducah, Ky., that during the epidemic of 1873, "after the sale of vegetables had been prohibited within the city limits, that the mortality among the poor whites and negroes diminished; but that many of the German population, regardless of the prohibition, would go out of the city and obtain vegetables. It came to be a recognized fact that Monday was the largest *burying-day*, from the fact that individuals of this class would drink excessively and eat freely during Sunday, and a large number were invariably attacked with cholera on Sunday night and Monday morning."

On the development of an epidemic of cholera it is well for all persons in whose power it may be to at once leave the infected locality. Niemeyer's rules were:

- (1) *To start soon enough.*
- (2) *To go as far as possible.*
- (3) *Not to return until the last trace of the disease had disappeared.**

Admirable rules, if adopted and carried out to the letter. But one who starts too late may carry the disease in his person; one who travels too short a distance may be overtaken by the disease; while those who return to their homes with the same haste that attended their departure not infrequently fall victims to the disease.

Flint recommends that the removal of persons in districts where, *owing to the activity of auxiliary causes, the disease is*

* Niemeyer, op. cit., p. 662.

*especially rife, should be enforced, as a sanitary measure, by municipal authority.**

Those individuals who remain in an infected locality during an epidemic of cholera, from necessity or from philanthropic motives, will do well to observe rigidly fixed rules as to their individual habits, which may properly be considered under several heads. Of personal cleanliness sufficient has already been noted; we therefore pass to other considerations.

1. *Dress*.—The surface of the body should at all times, both of the day and of the night, be fully and warmly protected. Under-garments which have become saturated with perspiration should be removed, the surface of the body briskly rubbed, and dry articles substituted. Whatever may suddenly check perspiration or induce a chilliness is considered dangerous and should be avoided. A broad flannel bandage worn over the abdomen and around the person, even in the oppressive weather of summer, will impart a sense of comfort and a decided relief to the abdominal malaise so universally experienced during a cholera season.

2. *Diet*.—While it is advisable for all persons to be careful in their diet, and rigidly to avoid all articles of food that are known to be indigestible, it is still as necessary not to produce too sudden and radical a change in the diet. In other words, excesses of all kinds should be avoided; the digestive apparatus should be encouraged to the performance of its duty by the presence of good, well-prepared, wholesome food. Beef, mutton, poultry; rice, hominy, farina; wheat, corn, rye; coffee, tea, chocolate; and the various condiments, as salt, pepper, mustard, and other spices, may be freely used. Nor can we see any reason why such articles as butter, milk, eggs, etc., which a distinguished physician prohibits under the generalization of animal products, should be prohibited. Wine, brandy, and malt liquors may not only be allowed, but when used in moderation are extremely useful in evert-

* Principles and Practice of Medicine, p. 468.

ing those debilitating influences which so often prevent the system from repelling the disease; but their use should be interdicted positively whenever undue stimulation results. Experience has shown that a debauch predisposes to cholera when the disease is epidemic.

The free use of salt with food during a cholera epidemic is strongly recommended by several writers, who urge that the debilitated condition of the stomach and bowels, which is known to predispose to cholera, is removed by its tonic influence. In this way it has undoubtedly some prophylactic power. Its value as a disinfectant is recognized.

The condition of the drinking-water should always be an object of solicitude, and it is well to cultivate self-control and to refrain from drinking water except from the supply which is habitually used; that is, a person whose home is in an infected locality should be careful to supply his family with pure drinking-water, and should impress upon one and all the absolute necessity of drinking none other.

In relation to the vexed question of the use of fresh vegetables and fruits, upon which so much has been written, it is safe to assert that such ripe and well-cooked vegetables as an individual habitually uses with impunity may be eaten during a cholera epidemic; but when it is known that certain articles have invariably produced indigestion when eaten prudence demands that they should be rigidly avoided.

The necessity of restrictions among the lower classes of society arises from the fact that persons of this sort imprudently indulge in the use of unripe and badly-cooked vegetables, or those in which the process of vegetable decomposition already has commenced. But it is not to be imagined that such fruit will *per se* produce cholera. It may induce an attack of sporadic cholera or cholera morbus, and it does predispose to the rapid development of the disease after the specific poison has entered the alimentary canal.

It is well to close this paper with a remark borrowed in

part from Dr. Murray. Concealing the truth does no good; but it creates confidence when a true knowledge of the mode by which cholera is communicated, and the absolute power which disinfectants exercise in arresting the spread of the disease, is made public.

LEBANON, KY.

DIAGNOSIS OF ABDOMINAL AND PELVIC TUMORS.*

BY J. C. REEVE, M. D.

It is mostly during the last twenty years that our knowledge in regard to abdominal and pelvic tumors has so increased as to be justly regarded as one of the great triumphs of our art. Diagnosis, upon which successful treatment so closely depends, has been especially improved. We may perhaps be best assisted in realizing our advance by a glance at a not remote period of the past. Thus a gentleman has just stated in a medical journal that he once saw, within a brief period, in a leading city of England, three cases in which a tumor was supposed to exist, and three cases of supposed pregnancy, the supposition in every case proving incorrect, the tumors being pregnancy and the pregnancy a tumor. This was in the early days of auscultation, and by that means alone a correct diagnosis was made.† Yet with all that has been done there is yet much to do, and the work is going on now as energetically as at any period of the past. The present time is peculiarly interesting in reference to every thing relating to this subject. Three important works, two of them by men of the greatest experience, have just issued from the press. New modes of diagnosis have just been

* Read before the Montgomery County Medical Society, and published by request of the Society, expressed in a resolution.

† Clinical Reminiscences. By Peyton Blakiston, M. D., etc. Medical Times and Gazette, November 22, 1873.

presented. Claims are made of others, very important in character, which have not yet been substantiated by that general testimony of independent and unbiased observers which is always required to establish scientific matters. The immediate future therefore seems to promise an advance equal to any in the past, and now seems to be a most appropriate time to survey the field, examine the situation, and mark the changes about to occur.

The first point to examine is the extent to which we can rely, in making a diagnosis, upon a microscopic examination of the contents of an abdominal tumor, withdrawn by tapping or other means. In the work of Dr. Atlee just published* the claim is made that the *fluid of ovarian cysts always contains a cell peculiar to these cysts alone*; a cell easily recognized, responding to certain re-agents as no other cell does, and consequently pathognomonic of that form of disease. This cell is described as round, delicate, transparent, containing a number of fine granules, but no nucleus; varying in size, but generally about as large as the pus-cell. On the addition of acetic acid the granules become more distinct and the cell more transparent. Ether causes the granules to become transparent without changing the appearance of the cell. The only cells likely to be confounded with them seem to be pus-cells and white blood-cells, which are distinguished by their different behavior under re-agents. The inflammatory globules of Gluge are very similar to them in appearance, but are much larger.

I should have said that the chapter in Dr. Atlee's work upon this cell is by Dr. Thos. M. Drysdale, of Philadelphia. He has devoted himself to the examination of the fluid of ovarian tumors for twenty years, and enjoyed the abundant opportunities afforded by Dr. Atlee's extensive practice. Dr. Drysdale communicates a paper upon this subject to the volume of Transactions of the American Medical Association

*General and Differential Diagnosis of Ovarian Tumors. Philadelphia.

for 1873. In this paper his claims as the discoverer of this diagnostic test are distinctly made, and their reliability reiterated. He receives the emphatic indorsement of Dr. Atlee, both in his work and in the debate which followed in the section of the Association. In the former Dr. Atlee says that in several cases of great difficulty of diagnosis he was enabled to decide only by this means; in the latter that he has over and over again based his diagnosis upon this cell.

If other recent writers upon the subject bore any thing near as favorable testimony to the value of this means of diagnosis, there would, of course, be an end of the matter. But unfortunately this is not the case. Not only do they not rely upon the cell for diagnosis, but they are not even clear as to its existence. Thus Dr. Peaslee* says: "I have not been able to detect them in the fluid of all cysts known to be ovarian, and further observation is necessary in order to determine their precise diagnostic value." He gives a representation of these cells, one showing their size as compared with pus-cells. This is copied from Koeberle, and here the ovarian cell is very much larger than the pus-cell; so much larger that they could by no means be confounded, and looking indeed very suspiciously like representations of the inflammatory corpuscle of Gluge.

In this connection too it must not be overlooked that Dr. Drysdale, in his representation of the cell given with the paper read before the American Medical Association,† has "corrected" the representation given in Dr. Atlee's work. Three granular cells of much larger size than the others, and looking again very much like the inflammatory corpuscle, are left out, and stated in a note to have been "inaccurate!"

Turning now to the work of Spencer Wells,‡ we find in the chapter on the fluids of ovarian cysts a representation

* Ovarian Tumors, New York, 1872, pp. 117-8.

† Transactions, 1873, p. 180.

‡ Diseases of the Ovaries. New York (republishing), 1873.

(on page 100) of a cell which looks like the granular ovarian cell of Dr. Drysdale. It is said that "they appear to be identical with the pyoid bodies of Lebert or the exudative cells of Henle;" but not a word is said in this work of the diagnostic value of this or any other cell, much less is its presence put forward as pathognomonic of an ovarian cyst.

But absence of supporting testimony is not all. A discussion in regard to this cell was held in the Pathological Society of Philadelphia,* and its very existence was called in question. Dr. Tyson, a gentleman well known as an authority in microscopy, stated that "he was perfectly familiar with the cell spoken of as the ovarian cell, which is nothing more than the ordinary compound granule cell formerly improperly called the exudative corpuscle or inflammatory corpuscle of Gluge, and liable to be found in any locality."

I regret to say that I can contribute nothing to the settlement of this disagreement of authorities. It is not a question for the practitioner to settle, but for the microscopists, and for those with abundant material at command. So far as this part of the subject is concerned, I can but lay before you the state of the question and the position of the parties. The interest attaching to it is clear. Indeed "interest" is far too feeble a term; its importance can scarcely be over-rated. This much I will say in conclusion:

Any man who has worked at a subject for twenty years and made hundreds of microscopic examinations deserves a very respectful hearing from the profession, and very careful attention should be paid to what he claims to have seen.

It will require a very large amount of negative evidence, and from widely-different sources, to overthrow positive testimony of this amount and character.

The next point to examine is *the extent to which we are assisted in diagnosis by a physical and chemical examination*

* Medical News and Library, May, 1873, p. 75; Philadelphia Medical Times, April 12, 1873.

of the fluid withdrawn from an abdominal tumor. It is well known that there are cysts, having their origin from the vicinity of the ovaries, which most closely resemble ovarian tumors, but which from their different nature should be carefully distinguished from them. They arise from the areolar tissue of the broad ligament, from that relic of fetal life, the parovarium, or, according to some, are developed from an ovisac. How closely they resemble ovarian tumors is well stated by Dr. Atlee. "There is no condition of the female abdomen," he says, "that imitates ovarian dropsy so much as this." When the disease is fully developed the "external appearances are identical with those of unilocular dropsy at a similar stage of development." With such striking similarity of external appearance, it is an important fact that the character of the fluid in such cysts is peculiar, and such as to distinguish them without difficulty from ovarian cysts. In appearance it is peculiarly clear and limpid, like spring-water, even when viewed in bulk. Its specific gravity is very low, ranging from 1.004 to 1.010, and it contains scarcely a trace of albumen, if any at all. These characters serve to distinguish it at once from the fluid of ascites and from any of the various fluids found in ovarian cysts, and except this examination there is no means of distinguishing between the two forms of disease. There is, as Dr. Atlee says, a sensation of a *thinner* fluid communicated to the hand upon examining the fluctuation, which I have had an opportunity of verifying in a case which came under my observation, and which may excite a suspicion in the mind of the examiner, but the character of the fluid can alone decide the case.

Were this a mere refinement in diagnosis it would not merit a moment's attention, but the truth is that the most important practical consequences depend upon it. Cysts of this character, if emptied by tapping, in the majority of cases do not refill; and should they do so they are amenable to a treatment far less perilous than ovariectomy. Their limpid

contents are unirritating to the peritoneum, are readily absorbed by that membrane, and consequently, if a permanent opening be made in the cyst wall, which Dr. Atlee does by pulling it out through a very short incision in the abdomen and cutting out a piece, a permanent cure is effected. This is a most important fact connected with this branch of the subject, one which can only be appreciated by those who know how to estimate aright the uncertainties, the difficulties, and the perils of ovariectomy.

Thus far I have alluded only to what is said by Dr. Atlee in regard to these cysts, and he certainly teaches the facts here presented more clearly, and makes the practical deductions more emphatically, than any other writer. Yet a recognition of these cysts is found in other works. Thus Spencer Wells, in his recent work, speaks of cysts of the broad ligament under the general head of "extra-ovarian cysts." He recognizes the fact that the contents of these cysts are generally limpid, and that if they are emptied they frequently do not fill again. But the facts are not made nearly so prominent nor the practical deductions drawn so clearly; much less do we find any proposition of a special operation, as by Dr. Atlee, of removing a portion of the cyst-wall for a cure. Mr. Wells points out (p. 230) two conditions in the history of a case under which an extra-ovarian cyst may be suspected: "1. When it has been of many years' duration, with very little damage to the general health; 2. When it has formed with such extreme rapidity as to be almost certainly mistaken for ascites." If *in a young person* these conditions are found, he says it is almost certain that the cyst is extra-ovarian and the contents limpid. But in my limited experience I have found these conditions obtain and the patient *not young*, and an extra-ovarian cyst proved to be present.

Dr. Peaslee (p. 100) states that these cysts were recognized in England by Drs. Bird and Cæsar Hawkins before 1850, and by Dr. Clay at a still earlier date; and that the latter gentle-

man "has had forty cases cured by a single tapping, and only six of which filled again." He also states a fact with regard to them which I do not find elsewhere. It is that in the majority of cases they do not become pediculated at all. This is a most important fact, an example of which has fallen under my own observation; and it is especially important in reference to an attempt at extirpation under the impression that we are dealing with an ovarian tumor. It may possibly be advanced that these tumors being monocystic, and therefore, as a general rule, non-adherent, it is quite as well to go on and extirpate them, the difference between the danger of extirpation and that of opening the abdomen to remove a portion of the cyst being but slight. In case, however, that such a tumor has no pedicle the case is widely altered, and my own limited experience is decidedly adverse to the general doctrine as to the lesser danger of monolocular cysts. Thus, of the three fatal cases of ovariectomy I have seen, having been concerned in some way in their treatment, two were monolocular, while I have not seen a fatal case of multilocular tumor of some seven or eight operations witnessed.

Again, on page 153, Dr. Peaslee draws, in parallel columns, the points of differential diagnosis between cysts of the broad ligament and those of the ovary. On the side of the former he places "*per vaginam*, fluctuation very clear." In a case which came under my own observation, afterward verified as a case of cyst of the broad ligament, there was absolutely no fluctuation *per vaginam*; and I mention it here especially because upon that point chiefly, the absence of fluctuation at the base, a diagnosis of cyst of the broad ligament was rejected, and that of one large ovarian cyst, with smaller cysts at the base, was adopted.

There is another form of tumor which, it is claimed by Dr. Atlee, can be distinguished from ovarian by examination of the fluid drawn from it. This is fibro-cystic tumor of the uterus, the most difficult of all to distinguish from ovarian

disease by the ordinary means of diagnosis. Spencer Wells has removed a tumor of this kind and not discovered its nature until after the operation. He says (p. 201) the diagnosis must always be "very uncertain.." Dr. Atlee says (p. 262) that "no amount of experience will avail the surgeon in making a differential diagnosis by the ordinary methods of examination;" and Dr. Peaslee (p. 147) advises in doubtful cases to assume, in commencing ovariectomy, that the tumor is one of uterine fibro-cyst until the operation has progressed far enough to decide this point. Dr. Thomas* gives an instance of a tumor of this kind, which, even when removed from the body and placed on the table, deceived medical men by the sense of fluctuation it gave. Under these circumstances any addition to our means of diagnosis is to be welcomed, and if reliable its value can scarcely be overestimated. Dr. Atlee gives the *spontaneous coagulability of the fluid* withdrawn from the tumor as such a test of this kind of tumor.

Unfortunately again we do not find that support of this point and that assent of other authorities which is desirable. Dr. Peaslee mentions spontaneous coagulability of the fluid as one of the points in his table of the differential diagnosis of ovarian and uterine fibro-cystic tumors, but lays no special stress upon it. Spencer Wells speaks (page 201) of the fluid in both of his cases as "peculiar; not the viscid mucoid fluid of multilocular ovarian cysts, but a thin serum, with five, ten, or fifteen per cent of blood intimately mixed with it, and not separating until after standing for some hours."

This diagnostic point, then, like the ovarian cell, requires further investigation and further testimony. Fibro-cystic disease of the uterus is an extremely rare form of disease; but, however rare, it will not do to assume that it is not present in an individual case because unlikely, nor to neglect any and every mode of investigation.

* Diseases of Women, third edition, p. 505.

What now is the practical lesson to be derived from a consideration of the situation as here briefly presented? It is one the importance of which can not be overestimated; one which the student, investigator, and operator can never afford to neglect. It is that an examination of the contents of a tumor should always be instituted before proceeding to an operation. This is the doctrine distinctly taught by Dr. Atlee in his work. "Ovariectomy ought never to be attempted by the inexperienced surgeon without previously resorting to tapping as a means of diagnosis" (page 47). The great value of an examination of the fluid contents of tumors as a means of diagnosis is the central idea, so to speak, of Dr. Atlee's work; and in respect to the prominence which he gives to this idea, and to the emphatic inculcation of this principle, his work is, in my humble judgment, in advance of any other which has yet appeared, no matter how high may be the source from which it emanates or how extensive the experience by which it is enriched. I am convinced from my own experience that this doctrine is correct.

To obtain a specimen of the fluid of an abdominal or pelvic tumor for examination tapping has been heretofore resorted to, and until lately has been the only available means. In regard to the amount of danger attending this operation there is a very wide difference of opinion among authorities, into the statement of which it is not necessary to go. That the danger has been exaggerated there is no manner of doubt; that the operation should not be lightly undertaken, and that it is always justifiable in view of saving to the patient or avoiding more perilous undertakings is equally certain. All questions, however, in regard to tapping as a means of obtaining a specimen of the fluid of a tumor for examination have been superseded by the appearance of the aspirator, which accomplishes the end with a minimum of risk to the patient. This late and important addition to our means of diagnosis of internal tumors has occupied so much attention

of late, and has been so frequently described, as to need no description here. Having occasion to use the instrument at a time when one could not be procured, I had a needle made which I attached by india-rubber tubing to a stomach-pump, and used this very satisfactorily, and expect to use it again. It is more cumbersome than the aspirator, and does not allow a sight of the fluid as it flows out; but it answers every purpose, and furnishes a good substitute for those not within easy reach of the instrument-maker. The hypodermic syringe is also used to obtain a specimen of the fluid, and does well enough if the fluid is not too viscid to flow through the fine opening of the needle. The value of this addition to our means of diagnosis may be appreciated by the fact that one of our latest and best works on diseases of women states that there is no way of making a differential diagnosis between extra-ovarian and ovarian cysts except the exploratory incision, the greater danger of which as compared with the simple needle-puncture of the aspirator is apparent and needs no illustration.

Another mode of investigation for the diagnosis of these tumors has been recently introduced; so recently that no mention of it is made in either of the three works upon ovarian disease, all of which bear the date of 1873, yet it is one whose value and importance are apparent upon mention. I allude to *manual exploration per rectum* as taught by Prof. Simon, of Heidelberg.* The patient being placed fully under the influence of an anæsthetic, the hand is introduced through the sphincter as far as the commissure of the thumb will permit, or even the whole hand is passed in if necessary. This can generally be done without difficulty, and without resorting to incisions, which are to be made if necessary, and which entail but a few days' inconvenience and trouble to the patient. A hand which does not exceed ten inches in

* A translation of Simon's paper is published in the American Journal of Obstetrics, February, 1873.

its greatest circumference—and Prof. Simon's measures eight inches—can thus be passed, and in women, for whom it is more frequently required, more easily than in men. When the whole hand lies in the cavity of the sacrum the fingers pass still further up, and the lower two thirds of the abdomen can be explored by aid of the other hand making pressure externally, as in the ordinary bimanual exploration. The uterus, bladder, and ovaries can be felt, abnormal growths in the pelvis fully examined, and a point reached as high as the umbilicus in front and the lower edge of the kidney behind. This mode of exploration has been put to frequent practical test by its originator. He says: "In two cases of ovarian tumor in which I made use of the manual exploration, and in which the result of the exploration was controlled [verified?] by the subsequent extirpation, I accurately determined the size and length of the pedicle, the nature of the healthy ovary, the absence of adhesions to the brim of the pelvis, and in one case two fibroid tumors of the size of cherries, which were situated at the fundus uteri. In a case of multiple fibroid tumors where I explored in this manner I distinctly felt the site, size, and breadth of base of tumors in the corpus and fundus uteri. In one case I even combined a therapeutical act with the examination, in liberating one of the fibroids of the fundus which had become wedged into the pelvic cavity and pushing it into the abdomen."

This mode of exploration has been resorted to by many other eminent physicians of Germany. Prof. Spiegelberg, of Breslau, in a clinical lecture upon the diagnosis of cysts of the ovary,* speaks in the highest terms of its value. By it he says he was enabled to reach and recognize the origin of a tumor from the fundus of the uterus, and thus prevent an intended operation of ovariectomy.

I have met with a most interesting case in which a resort to this mode of investigation, only prevented by a consulting

**Sammlung Klinische Vorträge*, No. 55, 1873.

physician, would have established a diagnosis long before the progress of the case permitted one to be formed. A round, smooth, and firm but yet elastic tumor occupied a position in the pelvis between the vagina and rectum, and could be felt in the abdomen above the left ramus of the pubes. The uterus was carried above the right ramus, stood prominently out, and very distinct from the part of the tumor to be perceived through the abdominal walls. A sound passed into this organ and moved did not move the tumor. There had been no flooding, nothing in the history to point to a uterine fibroid. The tumor was punctured to obtain a specimen of its contents if a cyst, but only a small quantity, a drachm or so, of bloody fluid, was procured. Finally after several weeks, by the advance of growth, I was enabled to reach a point of junction between the posterior wall of the uterus above the cervix and the tumor, thus establishing its connection with this organ and its nature. By a rectal exploration this would undoubtedly have been made out at a much earlier period, and thus much doubt and painful uncertainty have been spared.

A review then of the subject of diagnosis of intra-pelvic and abdominal growths reveals a situation of extreme interest. Advances have just been made which can only be regarded with great satisfaction, and others are claimed to have been made which can not fail to inspire the liveliest hope. If these be established by the concurrent testimony of other observers unbiased by any personal interest in them, their originators will receive due and lasting honor. Whether established or not, the attention and study now being devoted to this subject gives assurance that here, as in every other branch of medicine, there is to be no halt in that progress which is characteristic of the age.

DAYTON, OHIO.

Reviews.

A System of Midwifery, including the Diseases of Pregnancy and the Puerperal State. By WILLIAM LEISHMAN, M.D., Regius Professor of Midwifery in the University of Glasgow, etc., etc. Philadelphia: Henry C. Lea. 1873.

We are satisfied that no one who has carefully read the historical and critical essay on the mechanism of parturition by this author will fail to pay the same attention to this work on obstetrics which he now presents to the profession. They would expect to find the same evidence of careful clinical study, the same scholarly acquaintance with doctrine, and the same influence of the spirit of truth which were shown in the treatment of a portion of the subject extended to the whole. We are happy to be able to state, after a careful perusal and examination of this volume, that they will not be disappointed. That the work deserves unqualified laudation, that it does not in some points need correction, we would be far from maintaining; yet, in our humble opinion, the author has succeeded in presenting to the profession an admirable treatise, especially in its practical aspects; one which is, in general, clearly written and sound in doctrine, and one which can not fail to add to the already high reputation of its author.

In our examination of the work we can but touch briefly upon two or three prominent points which may prove of general interest. Preceding the usual treatment of the anatomical and physiological part of the subject we find an introductory chapter, which is partly historical and partly upon the comparative anatomy of the pelvis. In regard to both of its

divisions we wish, in the interest of the student, that this chapter had been longer, as there is so little within his reach upon these subjects, and the study of them can not fail to increase his interest in the succeeding portions of the work, and to be in many ways advantageous to him.

Passing on to the management of natural labor, the reader will find that the author belongs to that modern school which entirely rejects support of the perinæum. He believes it to be "irrational and useless in all cases and undoubtedly hurtful in some." Admitting that, do what we may, rupture of the perinæum will occur in a certain proportion of cases (he says every one else admits it as well, to which, by the way, we do not assent), he adds: "The practitioner who never puts his hand to the perinæum will, we firmly believe, have fewer cases of ruptured perinæum in his practice than he who admits support in every form as applicable to every case of labor," and he looks upon it as "a relic of meddlesome midwifery, in which we presume by irrational and bungling interference to dictate to nature."

This is certainly a question which, like most others, has two sides. It is one of those upon which doctrine has swayed from one extreme to the other,* and it seems that we are just now about to reach one of the extremes. If the choice is to be between one of the extremes (as illustrated, for instance, by Ramsbotham, who counsels sitting down as soon as the head approaches the outlet, and rendering support by bracing the arm against the bedstead) and the other (which is an entire surrender of the process to nature), then we choose the latter. But, as usual in such questions, there is a medium course which we prefer to follow, and it is indicated even by the author a little further on. It "consists in *watching*

* The student will find an exhaustive statement of the history of this subject in a paper by Dr. Wm. Goodell, which is creditable not only to the author but to the literature of this country, in the *American Journal of the Medical Sciences* for January, 1871.

the amount of pressure to which the perinæum is being subjected;" and we italicise the key-word of the sentence, for we believe that it is only at certain critical moments and under certain circumstances that the support is of any service. If the perinæum gives way, it can only be just when distended to the utmost by the child's head, and only then can it need any support. Every one knows how gradual and intermittent is the advance, as a general rule, and during all this time we can not see why pressure is at all needed; but just at the termination of labor the distension is extreme, and if the pains are violent, we certainly believe that judicious support is efficient in preventing an accident always distressing and mortifying to both patient and physician.

There are certain classes of cases which we believe certainly require it. One of these are primiparæ, with small vulvar aperture, in whom the head distends the perinæum until it fits over it like a cap, and requiring a long time before the vulva is sufficiently dilated to allow the head to pass. These are the cases in which the continental practitioners counsel incisions. We have seen some of them in which we thought the head would perforate the perinæum in spite of all we could do, and feel very certain that we rendered efficient service by pushing or drawing the head forward and upward, causing it to hug the pubic arch, thus "imitating" nature, and by no means "dictating" to her. Another class of cases is those in which the labor proceeds with unusual rapidity. What would be the position of a young practitioner who had followed the advice not to pay any attention to the perinæum in such a case as we have lately operated on? The patient was in labor with her *third* child,* under the care of a midwife. Her delivery took place before she had scarcely time to get

* Tyler Smith says that "some of the most practiced accoucheurs who have written have stated that they have never known an instance of laceration in secret births, where the woman has been left entirely alone." See Dr. Goodell's paper. In view of this statement the above case is deserving of record.

on the bed. The child was born *through* the perinæum, the rent extending into the rectum, but not implicating the vulva! Here legal proceedings would have been commenced, upon the ground that the accident occurred because ordinary attention was not paid to the patient, had not a legal opinion been given that as a woman presumably unskilled was employed the contract only implied such services as were naturally to be expected from such an unskilled person.

Neither of these classes of cases are very numerous or of frequent occurrence; still they are seen sufficiently often to make the watchfulness inculcated by the author far better advice to follow, in our opinion, than entire departure from a course recommended by so high authority, that in case of accident the practitioner would certainly be held culpable.

The subject of the mechanism of labor is pretty fully treated, as might have been expected, because a choice subject of the author; still the controversial part is presented in an appendix, while in the body of the work the complicated movements are clearly and succinctly described, and made as plain as any student could desire.

We should in justice, we presume, give the author's position in regard to points in dispute regarding this part of the subject. The chief point is a departure from the doctrines of Naegele as to the existence of a biparietal obliquity of the head at the brim of the pelvis, by which one ear is approximated to the corresponding shoulder. In this country this is far less noteworthy than in England, unless it be to those who have only used English text-books; for Dewees and Hodge have both taught the same doctrine, and Cazeaux's work is here widely diffused among the profession.

In the appendix of this work, an abridgment of the author's essay, the student will find the arguments which sustain the views which have for adherents such names as Velpeau, Cazeaux, Dewees, Hodge, Matthews Duncan, and many others, forming the "French" school of obstetrics as

distinguished from the English, the adherents and strict followers of Naegele's doctrines.

Naegele also taught that at the outlet of the pelvis the head still retained a certain obliquity, so that the right parietal protuberance in the first position was in advance and was born first. This is denied by Hodge, Matthews Duncan, and others, all of whom claim that there is a constant parallelism or "synclitism" between the planes of the head and the planes of the pelvis. The author's remarks upon this disputed point we hold to be eminently judicious. "These obliquities are of comparatively trifling importance, and should never have been bracketed with the other and really important movements." In short, this obliquity is not an essential part of the process, and may or may not exist dependent upon the tightness of *fit* of the head to the osseous passage. Of the truth of this we have convinced ourselves by careful observation as satisfactorily as of any thing we have ever studied.

In the use of the forceps the author, like most of his countrymen, prefers the straight and short instrument. It must be understood, however, that although the instrument he recommends is straight—*i. e.*, without the pelvic curve—it certainly is not *short* relatively to other instruments. He gives the length as fourteen inches, nine for the blades and five for the handles. Now this is a length greater than that of Ramsbotham's "long" forceps, which is but twelve and three quarters inches. It is longer than Simpson's, with the pelvic curve, which is given in his works at thirteen and three quarters inches, and those made in this country measure fourteen and a half inches. It is longer than any instrument of British authority given in a very comprehensive table of measurements in Murphy's *Midwifery*,* except two. In giving preference to a longer and stronger instrument the author clearly recognizes the inefficiency of the instrument generally used by his countrymen. He does not leave the

* Second edition, London, 1862, p. 369.

matter to inference. He quotes freely from Dr. Barnes as to the necessity of strength in the instrument, and reiterates the statement that "no greater error can be committed than to sacrifice power to elegance." This is sound doctrine, and we call attention to it particularly because it is an error very frequently committed in this country, not, however, by obstetric authority—although we could mention one notable instance—so much as by the instrument-makers, who use to inexperienced buyers the specious argument that a thin blade is easier introduced than one thick enough to bear the strain necessary to render it reliable and efficient, while the finer and more delicate appearance helps the sale. We have several times weighed instruments, and compared the weight with that given by the authors recommending them, and have almost universally found them lighter than they should be. In nothing can the young practitioner make a greater mistake than in providing himself with an instrument which may give way upon the first trial to which it is subjected.

Still, longer and stronger as the author's forceps is, it is still a *straight* instrument; and we confess to surprise in reading his remarks upon the danger and difficulty and sense of responsibility to be felt upon taking in hand the long instrument. He partially removes the impression this gives by stating that he believes the dangers of the instrument have been exaggerated, and by disclaiming any dogmatic preference for the shorter instrument. It can not be overlooked, however, that in this respect he is in harmony with the great majority of the teachers of his country. The history of the forceps in Great Britain presents some curious points for reflection and consideration. The very home of the instrument, the land of its discovery, within a period not remote it has there fallen to a lower point as regards utility, and been less frequently resorted to, than in any country of the world, and this with a sacrifice of infant life which has not only been a reproach to the nation abroad, but has drawn out

severe comments from writers at home.* We speak of the general use of the forceps; for while Wigand and Boer, in Germany, may have neglected the instrument to quite as great a degree as Collins or any other British authority, they had living at the same time with them Osiander,† who, for one at least, surpassed all others there or elsewhere, before or since, in the frequency with which he resorted to it, and the influence of whose teachings could not fail to prevent that general neglect which was shown in Great Britain.

It would be curious and perhaps instructive to inquire how much influence in restricting the use of the forceps has been exerted by the faulty and inconvenient British obstetric position. That the position on the side is faulty for the patient we believe to be clear, from a consideration of her instinctive expulsive efforts during the second stage, and the extent to which the full exercise of her voluntary power is hampered by lying upon the extremities of that side, and being unable thus to use her strength to the best advantage. That it is faulty and inconvenient to the practitioner we maintain from its preventing the use of the other hand to supplement and aid the one with which he is examining per vaginam; and when it comes to the use of the forceps this position is especially inconvenient, and adds much to the difficulties in the use of the instrument, especially to the beginner. Indeed the author admits that this position adds to the difficulties of the study of the mechanism of labor; and if this be true, it certainly is so in regard to the use of instruments. Whatever claims may be made for the position in ordinary labor, when it comes to rendering instrumental assistance we can see no excuse for maintaining it. When danger, or possible danger, enters as an element into the

* See Siebold's *Geschichte der Geburtshülfe*, vol. ii, p. 755; Arneth, *Ueber Geburtshülfe und Gynäkologie in Frankreich, Grossbritannien und Irland*, Wien, 1853, p. 187; and Churchill's *Theory and Practice of Midwifery*.

† Osiander used the forceps 1,016 times in 2,540 cases; Boer used them 119 times in 29,961 cases! Abegg, *Zur Geburtshülfe und Gynäkologie*, Berlin, 1868.

case, then all other considerations should yield, and that position be assigned to the patient which renders assistance the easiest, the speediest, and the safest; and that can be no other than the position on the back, the one adopted every where out of Great Britain. It seems incredible that a nation boasting so much, and so justly too, of the practical turn of its mind should adhere to a custom which increases so much the difficulty of rendering instrumental aid in individual cases, and which, in our humble opinion, has exerted a marked influence upon the national teaching of this branch of science. We believe then that it is the obstetric position in which the woman is placed in Great Britain which has tended to limit the use of the forceps, by rendering difficult the use of any other than the straight instrument, rather than a preference for this over the one with the pelvic curve.

If this position be sustained by the argument, which we have heard, that it is immodest or indelicate for a woman to lie on her back during labor, is it not strange that this has not been generally felt by women of other nations? And again, if this be the reason, do not our British friends, by advancing it, surrender at once a strong point in the contest they are now waging upon the admission of women to the practice of medicine?

Happily great progress is making in regard to the use of the forceps in Great Britain. The Dublin school has some time since, under the lead and teaching of the two Drs. Beatty,* emancipated itself from the horror of the instrument which once prevailed. Simpson's great influence was exerted in their favor, and later Dr. Barnes has most powerfully aided the current of professional opinion in the same direction. The author continues the good work, especially in his remarks upon the absurdity of the idea which

* Dr. Beatty says "the forceps was banished from practice through the whole of this country for forty years." *Contributions to Medicine and Midwifery*, Dublin, 1866.

has prevailed, that craniotomy is a safer operation for the mother than the forceps; and while he does not go as far as we could wish in regard to the indications for their use, the influence of his work will be to extend and increase their usefulness. While doing this he is still, to the student and beginner, conservative, and impresses the wholesome doctrine that "no mere question of time or of his own convenience can ever be a sufficient warrant for operative interference."

There are many points relating to the mere practical part of the subject to which we should like to call attention and present to our readers the author's views. We have only space, however, for the following:

"The operation of turning in a contracted pelvis may thus present itself to us under two distinct aspects—as a substitute for the long forceps and as a substitute for craniotomy. As regards the former, the experience of many independent observers would seem to show that, on the principle suggested by Simpson, turning may succeed when the forceps will fail; that instrument being therefore applicable to those cases only in which the contraction is moderate in degree. Owing to the difficulty of ascertaining the exact dimensions of the head and pelvis, a safe and, we believe, a very general practice is first to make a cautious attempt with the long pelvic curved forceps; and failing that—which, in skillful hands, is a safer operation to the mother—to proceed at once to turn. Turning as a substitute for craniotomy is a more important point still; so important indeed in a conservative sense that it can not fail to command the attention of every conscientious practitioner. Impaction of the head, or difficulty of displacing it so as to admit of the passage of the hand, and a degree of pelvic contraction beyond the limit which we have stated, are the two principal contra-indications of the operation of turning. The death of the child is not necessarily so, for craniotomy at the brim is by no means so safe an operation but that it may be fairly balanced against turning, even in the interest of the mother alone."

The remarks upon anæsthesia in obstetrics are remarkably brief, occupying less than two pages. This much, however, is evident from them: there is no longer any question as to

the propriety and advisability of using anæsthetics in labor. Speaking of the opposition which was made to this great advance in medicine, the author says: "How able and sensible men could write such trash, and argue gravely against the iniquity which was being perpetrated in relieving women from the effects of the divine curse, '*in dolore paries*,' will ever remain an inscrutable psychological phenomenon." The boon is now accepted without cavil. "In the hand of the skillful practitioner it is a power for good, and never for evil." Still we must express our astonishment at the statement that a tendency to produce vomiting is one of its disadvantages; for in a very considerable experience we can recall only one or two cases, if more than a single one, in which it occurred. For the statement that "the indiscriminate use of chloroform predisposes to hemorrhage after delivery," we should prefer "the *prolonged* administration," etc. We should have been glad to have seen pointed out the classes of cases of labor not requiring operative assistance in which an anæsthetic is especially beneficial, and in which it undoubtedly shortens the duration as well as lessens the pains of the process.

In concluding our examination of this work we can not avoid again saying that Dr. Leishman has fully accomplished that difficult task of presenting a good text-book upon obstetrics. While we will not be so invidious as to say that it is the best, we will cheerfully say that we know none better for the use of the student or junior practitioner. J. C. R.

The Anatomist's Vade Mecum: A System of Human Anatomy.

By ERASMUS WILSON, F. R. S. Edited by GEORGE BUCHANAN, A. M., M. D., Surgeon and Lecturer on Clinical Surgery at the Glasgow Royal Infirmary, etc. Ninth edition. Philadelphia: Lindsay & Blakiston. 1873.

Of all the text-books on anatomy in our language none are better arranged and none so handy as this, our oldest and

always our prime favorite. It is truly a *vade mecum*. This (the ninth) edition is edited by Geo. Buchanan, Esq., Professor of Anatomy in Anderson University, and its contents are brought fully up to the present time. Many new wood-cuts have been introduced; and though some of them are, we think, unnecessarily small, they are almost uniformly exceptionally good. It is a book to keep on one's office-table.

Relations of Colorado to Pulmonary Consumption. By THOS. E. MASSEY, A. M., M. D. Denver, 1874.

Probably there is no subject to which the profession of this country is looking with more lively interest than that of the influence of the climate of some of our western territories upon pulmonary diseases. Animated by this feeling, we took up this pamphlet with most pleasant anticipations of obtaining information, and of which we feel that we stand in need. We regret to be obliged to say that these feelings were changed to great disappointment. We would not criticise too sharply a paper which would not attract attention were it not for the great dearth there is of information on the subject, and the general wish that this may no longer exist. We may be permitted to indicate, however, to those who may hereafter undertake the task of writing upon this subject what we here further east do *not* want in such works. We do not want long disquisitions upon Niemeyer's doctrines, which occupy about one half of this paper, especially since those doctrines are not accepted by some of the leading authorities of this country and Great Britain. We do not want pages and paragraphs made up of quotations from standard authors. We do not want beneficial effects attributed to "electric" conditions, unless the electrometer is brought into play. We do not want the effort of the work laid out on the style, even when it gives us such sentences as "un-

complicated asthma notoriously and almost constantly, and often immediately, gets the hang of the Arab trick of silent tent-folding!" On the other hand, we *do* want information upon the subject; and to whoever will give us facts in regard to the climate of Colorado, of Texas, and of various parts of California, and reliable information as to the influence of those climates upon tubercular disease, the profession will be debtor, and will not be slow to acknowledge its indebtedness.

* * *

The Physician's Dose and Symptom Book: Containing the Doses and Uses of all the principal Articles of the Materia Medica and Officinal Preparations. By JOS. H. WYTHES, A.M., M.D., late Surgeon U. S. Vol's, author of "The Microscopist," etc., etc. Eleventh edition, revised. Philadelphia: Lindsay & Blakiston. 1874.

The fact that this little *vade mecum* has reached its eleventh edition is sufficient proof that it is in demand. It is certainly a useful work, and as a trouble-saver it is without an equal of its kind.

Clinic of the Month.

CONSTIPATION IN PNEUMONIA.—Prof. Skoda observes that in cases of pneumonia the practitioner not infrequently meets with obstinate constipation, which lasts for a long time; and the question arises whether for the relief of this he should or should not resort to active measures. Before replying to this, however, the point may be first considered of within what limits of time defecation may occur normally during a state of health, in order to judge how far constipation arising in disease is a disadvantage. And we find at once that great differences exist in this respect among persons in an entirely normal condition; for while in the great majority of men a daily stool takes place, in a not inconsiderable number this happens only every second or third day, and in some even more than three days elapse. On the other hand, there are other individuals whose normal condition it is to have more than one stool a day; a circumstance not to be overlooked in delivering a prognosis when they become the subjects of diarrhea. Again there are persons, chiefly females, in which constipation lasts not only for days, but even for weeks. While such prolonged constipation continues the subject of it is still able to eat with a good appetite, no especial or remarkable effects being produced by the food taken. This, of course, is not considerable in quantity, yet it remains inexplicable how during the continuance of such a constipation any thing can be eaten. The question arises whether such constipation does not lead to alterations in the person's state of health. Upon this point it is to be observed that the fæces discharged by such persons are not different

from those of individuals who have a daily stool. And there is good evidence to show that the fecal residua of nutrients may long remain within the canal without any corresponding damage being done to the economy, the fæces undergoing no change during a prolonged retention which can injuriously influence it; so that the differences in the production of stools are attended with no corresponding differences in health of the individuals concerned. This position, which experience has rendered irrefragable, is unfortunately continually sinned against in practice; and Prof. Skoda warmly protests against the unwarrantable manner in which purgatives are sometimes resorted to, running risks which might be easily avoided by bearing the above considerations in mind.

With respect to the gases which are developed within the intestinal canal, they are retained as well as the fæces; but in long-continued constipation, if this be not caused by a strictured condition of the canal, in the majority of cases no gases are present. It is well known that the presence of gases in the intestinal canal is essential for procuring the expulsion of its contents, and that they facilitate this by preventing the friction of the fecal masses against the walls of the intestine. Another important office which they fulfill is that they facilitate the movements of the diaphragm, following or receding before these; and if they were not present, the movements of the abdominal parietes consequent upon those of the diaphragm must be much more considerable. That the gases developed within the canal do exert a great influence upon its evacuation may be inferred also from the fact that in all cases where they are not present such evacuations are attended with very great difficulty. Of this influence of the gases we have further proof of the fact that in individuals in whom the evacuation of fæces is very difficult this is rendered much easier by the employment of articles of diet which favor the generation of these gases. To this end the use of brown bread is especially to be recommended.

Leguminous vegetables do this to a still greater extent; but their employment is not suitable for all persons, as in many they give rise to a troublesome amount of flatulence. But in order to render the evacuation of *fæces* easy, not only is it necessary that gases should be present in the canal, but liquids also. We should therefore endeavor to supply these by ordering such as will not be completely absorbed in the canal. Ordinary soup is not suited for this purpose, as it is too easily absorbed. Acid substances should be preferred, for most acids can not be at once absorbed in the canal, because they require first to be combined with alkalies, a process that requires some time for its accomplishment. Meanwhile they produce an irritating effect upon the canal, and contribute essentially to its easy evacuation. When constipation has lasted for weeks, and is dependent upon diseased conditions, such means are of no avail. The peristaltic movements are entirely arrested, and for such a state of things different measures must be adopted. While increasing the quantity of gases and liquids in the canal, we must attempt to reproduce the peristaltic movements, the cessation of which is sometimes dependent on the spinal cord. Quinine should be given, while friction of the abdominal parietes with aromatic oils and the use of electricity should be resorted to. In many such cases faradization of the abdominal parietes has proved of marked utility. In obstinate cases hydropathic treatment may be of service, as also may warm baths; and Oppolzer used to apply cold applications to the abdomen with frequent success.

Applying the foregoing observations to the case in question, it is therefore to be observed that the mere occurrence of constipation in pneumonia should cause no anxiety; and Prof. Skoda has frequently insisted that while it is requisite to keep the patient in a state of quietude, we should avoid administering purgatives merely because constipation is present. Of course the accumulation of *fæces* may be such as to become troublesome, or the gases and fluids may be in such quantity

as to impede respiration, so that when the abdomen becomes distended interference is not only justified but imperative. And in those cases where there are constant and irritating attempts at passing stools without any evacuation taking place the practitioner must also intervene in order to obtain actual evacuations. But Prof. Skoda insists strongly that if constipation has persisted for several days, and is accompanied by distension of the abdomen, it is not to be regarded as a disadvantageous circumstance, but, on the contrary, is a far more favorable symptom than a frequent passing of stools would be. Further, he declares that it is entirely an error to suppose that the pneumonia is favorably influenced by exciting a diarrhea; in fact, it is only to add a new ailment in the shape of an abdominal catarrh, increasing the patient's sufferings and rendering his condition worse than it was. In no case where diarrhea has occurred during pneumonia has this afforded any relief to the respiration. If for the reasons above given it becomes necessary for the practitioner to interfere during the pneumonia, he should do so by means of enemata. The internal use of purgatives is almost always attended by a certain amount of irritation, even when there is no pain produced in the abdomen; and this additional irritation is not a matter of indifference in a patient already suffering from a serious disease. It is the same with the action of purgatives as with that of emetics, as set forth by Oppolzer. There does not result from their use, as is so generally supposed, any real improvement or relief in the condition of the patient, whose original malady is much oftener rendered worse in consequence. It is only when the aggravation which they have caused has subsided, and the patient has reverted to his original condition, that he feels himself apparently better. Such apparent improvement is not to be ascribed to the action of the purgatives or emetics that have been administered, but to the ease which is felt at the cessation of the irritation which they give rise to, although this may leave the patient

in the same state in which he was before these irritants were prescribed.

CHINESE PHARMACY.*—The shops in the larger cities are often so well arranged as to render it difficult to suggest an improvement. Such a shop consists of an apartment intended for the reception of the customer, another in which the apothecary and his assistants are engaged, and these are divided by a third, in which the dry medicinal agents are stored in drawers. Above the drawers are shelves for the reception of porcelain and glass vessels, in which are contained conserves, electuaries, and powders. The furniture is made of oak, ash, pine, and occasionally of rosewood, and is often painted or varnished. The drawers are all properly labeled with yellow or red paper labels. In the rear of the shop proper are the laboratory and the store-room, which are orderly and methodically arranged. Pills are the most popular form for the administration of medicines.

Pills.—These are often composed of substances which would be disgusting to the European, and are variously colored—blue, red, etc. The substances necessary to their composition—among which are most popular powdered minerals and metals of various kinds, catechu and extract of opium, hair, dried skins and bones of animals, powdered canella, rhubarb, cardamom, ginger, galanga, etc.; starches, resins, and gum resins—are mixed in granite mortars with water, gum, honey, or syrup until a pill-mass is obtained; which is rolled out, divided equally with a knife, and formed properly by hand. The following formula will give a general idea of Chinese pills: *Py-choang* (yellow sulphide of arsenic) q. s. is heated in a vessel of cast-iron until vapor is no longer evolved; is then powdered, a little of the oil of *Hông-hoa* (from the fruit of *carthamus tinctorius*) is added, the mixture is heated and formed into pills of the size of a small pea.

*Translated from the *Arch. Pharm.* by Prof. J. Lewis Diehl.

Powders are also used quite extensively, seldom simple, more generally compound. One of the most remarkable formulas for a compound powder is the following: *My-to-seng* (chromate of lead) q. s. is powdered; the powder is introduced into jujube-berries from which the seed have been removed, and the berries so filled are then charred, again powdered, and given in doses of about seven grammes.

Ointments and *plasters* are also quite popular, and are usually prepared from lard and resins of various kinds. They are usually soft, and are obtainable, ready spread upon linen or paper, from itinerant physicians upon the streets. Debeaux found such a plaster—recommended against glandular inflammation—to be composed of resinous matter, fatty oil, and a large proportion of powdered mylabris. Some of the salves have been in use anterior to our era. Such are salves containing sulphur, sulphuret of calcium, or calomel and corrosive sublimate.

Conserves.—Many vegetable substances used in Chinese medicine—such as ginger, galanga, zedoary, Japanese may-flowers, young bamboo-stems, sugar-cane, sweet and bitter oranges, etc.—are conserved by dipping them several times in boiling syrup and drying them upon trays, by which treatment they become covered with a crust of sugar, and form very popular remedial agents.

Wine and Spirits.—Grape wine is not used in Chinese pharmacy, but is supplanted by *cha-sin-kiow*, a vinous liquid obtained by fermentation from rice. Rye, barley, and maize are also used for this purpose; their flours being mixed in large jugs with water, and fermentation incited by means of *kiou-tzé* (*i. e.*, wine-seed), which is really nothing further than yeast obtained as residuum in the vessels in which fermentation had previously taken place. Although the grape is cultivated in a number of the central provinces, wine from them is scarcely known. By the distillation of these fermented liquids their brandy is obtained, with which, among others,

the following *bitter brandy* is made: aloe, myrrh, olibanum, āā 12; curcuma, 2; they are powdered, mixed with 750 brandy, exposed in a close vessel to the sun for one month, and then decanted.

Infusions and decoctions are popular throughout China; wormwood, pennyroyal, elder-flowers, pansies, jasmine, peony-flowers, Japanese sophora, etc., being used for these.

Vegetable juices have been used by the Chinese physicians for centuries. Among these are the freshly-depressed juices of wormwood, portulaca, radishes, and of nelumbium epeciosum.

The most popular remedy among those of animal origin is a glue prepared from the hide of the black ass (*N'go-kiao*). This glue must be prepared in a prescribed manner from the water of a celebrated well in the neighborhood of *N'go-Hien*, which is said to be in communication with a subterranean lake, and is by the government opened only from November to March. The glue (gelatin) is found in the markets in the form of small tablets, upon which the name and residence of the manufacturer is stamped in gold letters. It is largely sophisticated by glue obtained from other sources.

An extensive list of medicinal agents of mineral, vegetable, and animal origin is included in the paper of the author above referred to, and the special uses and supposed medicinal properties are indicated. The list includes many curious and disgusting substances.

VACCINE VIRUS.—Vaccine virus which had been preserved in gypsum (according to the method of Ferrer), and another sample which had been preserved by wrapping in tin-foil and paper, was found by Dr. E. Y. Müller to be unsatisfactory in its action when used immediately after mixing it with water or glycerine; but when it was allowed to macerate for eight days in glycerine very satisfactory results were obtained. The author has also observed that glycerine affords an

excellent preservative for the virus; and suggests that fresh virus be immersed in glycerine, believing that it will then keep for several years. (*Ibid.*)

TINCTURE OF IODIDE OF TANNIN OF DR. BOINET.—This preparation is prepared by dissolving 50.0 parts tannin in 500.0 parts distilled water, and adding 25.0 parts tincture iodine. He uses and recommends it as the primary application for all fresh wounds, and states that by this treatment he has never observed diphtheritis, and only in isolated cases pyæmia. (*Ibid.*)

MERCURY.—The injurious influence of mercurial vapors in looking-glass factories, etc., is, according to J. Meyer, entirely obviated if after the day's work about one half liter ammonia-water is sprinkled over the floor of the shops. (*Ibid.*)

POWDERED MEAT.—Powdered meat is prepared by Danecy, *pharmacien en chef* of the hospitals of Bordeaux, by finely chopping the fresh meat, spreading it upon muslin, and drying it rapidly in a current of air. A friable mass is formed, which readily yields a brown, nearly odorless powder, possessing a feeble saline taste, and of which one part represents five parts of fresh meat. It is used and readily taken by patients by adding a tea-spoonful to a cup of beef-tea or soup, or by spreading upon bread. For children it is mixed in certain proportions with the ingredients for biscuits. (*Ibid.*)

A NEW OPERATION FOR THE EXTRACTION OF CATARACT.—The following translation from a late monograph by Dr. R. Liebreich, Professor of Ophthalmology and Surgeon to St. Thomas's Hospital, is furnished us by J. G. Rogers, M. D.:

. . . "The patient is placed upon the back, and is not chloroformed unless he insists upon it. The pupil has been as much as possible dilated with atropia the evening previous.

The operator stands behind the head of the patient if he operates on the right eye; on the left side of the patient if it is the left eye that is to be operated upon. An assistant is not indispensable. The only instruments needed are a Graefe's knife, quite narrow, and a cystitome and scoop combined in one handle. Supposing that the right eye is to be operated on, the operator retracts the upper lid with the index-finger of the left hand, while at the same time he lightly places the medius in the internal corner of the eye on the sclerotic. The knife, with the back toward the eye, is held horizontally in the right hand in such a way that the blade will form an angle of forty-five degrees with the horizontal meridian of the eye. It must be made to penetrate the sclerotic about one millimeter from the margin of the cornea, and then passed onward through the anterior chamber so as to emerge through the sclerotic about one millimeter beyond the inner margin of the cornea, thus traversing a horizontal line a little below the border of the dilated pupil. The knife is then advanced far enough in the same direction, so that in withdrawing it the incision may be completed; at the same moment the upper lid is to be dropped. The second step in the operation consists in the careful tearing of the capsule with the cystitome. To finish the operation light pressure is to be made with the back part of the scoop against the lower border of the cornea, while at the same time a very light pressure is brought to bear upon the upper part of the cornea by the index-finger of the left hand, which at the same time retains the upper lid. By this means a slight rotation is given to the lens. Its lower border advances against the lower part of the interior surface of the iris, pushes it forward, glides along the surface to the pupil, stretches and passes through the sphincter, and finally engages itself loosely in the wound, which gapes ready to receive it, under the pressure of the scoop and finger. A light pressure of the index-finger, gliding at the same time the upper lid downward, suffices then to com-

plete the exit of the lens. The same movement of the lid is again employed to discharge the *débris* of cortical substance which may have remained, after first having caused them to pass from behind the iris through the pupil by a slight rubbing over the closed lid.

"If it is found afterward that the pupil does not appear round, but that its border seems to be retained in the wound, its normal position may be restored by an upward movement of the lower lid; or if that does not suffice, by the introduction of the curette. Afterward atropia is to be instilled and the eyes closed with a bandage.

"What then are the advantages of my method?

"*First*—Of all the methods of extraction it is certainly the simplest and least painful.

"*Second*—It is incontestably the easiest to execute, and does not demand great experience. Accordingly it recommends itself to those surgeons who have occasion to operate for cataract only at long intervals, and to those patients who can not repair to the great centers to confide themselves to the more experienced surgeons. This great facility in operating takes away all pretext for the operation of couching, which, notwithstanding a just and general condemnation, is nevertheless sometimes practiced.

"*Third*—It is preferable to the flap extraction on account of the precision and constant regularity of the incision.

"*Fourth*—It has over the method of Graefe the advantage of a more favorable location of the incision and of avoiding iridectomy entirely.

"*Fifth*—It contrasts favorably, as does the method of Graefe, with the flap extraction relatively to the progress of the cure, by reason of the slightness of the influence which age, constitution, general health, and climate exercise upon it; by reason of the less demand for quietude after the operation; and above all by reason of the slight tendency to suppuration of the cornea."

Notes and Queries.

ESMARCH'S BLOODLESS OPERATION FOR A CIRCUMSCRIBED TRAUMATIC ANEURISM BY D. W. YANDELL, M. D.—A young man was stabbed on the outer side of the left fore-arm, with a pocket-knife, on the 20th of December, 1873, the blade puncturing the radial artery at the point where the long supinator muscle overlaps that vessel. The hemorrhage was represented to have been alarming at the time and with great difficulty arrested. When the compresses and bandages used for that purpose were removed a tumor about the size of a guinea-egg was observed immediately over the radial artery, near the seat of the wound. The patient presented himself at the surgical clinic of the University of Louisville on the 10th of February. The external aperture of the wound had scabbed over. About one inch from this, on the inside of the fore-arm, there was a well-defined tumor of moderately firm consistency throughout its larger part, while a small portion was still compressible and spongy. It pulsated and afforded a distinct bruit. Compression of the brachial artery cut off both these and diminished somewhat the size of the tumor. A fair trial, extending through five days, was given to the "Dublin method," relays of students making digital compression both upon the brachial artery and immediately over the tumor itself, but without other effect than to weary the patient. "Manipulation" after the method proposed by Sir William Fergusson, and successfully executed in a case of popliteal aneurism by Mr. Teale, was also attempted with no better results.

On the 16th of February the patient was brought before the class, chloroformed, and Esmarch's elastic bandage applied by my friend, Dr. Kastenbine, from the fingers to the mid-arm. Immediately above the bandage a rubber cord was wound tightly several times round the limb to compress the afferent vessels, and tied. The bandage was now removed and the usual incisions made. Not a drop of blood followed. The operation was in all respects as easy and as quick of execution as though done on the cadaver. The tissues were almost of a waxy whiteness. The sac was exposed, opened, and its contents turned out; the wound in the artery was brought clearly into view, the vessel itself being entirely empty; a ligature was thrown above and below the puncture, and all without so much as soiling my fingers or the knife. The rubber cord was now removed, when the limb, before completely blanched, quickly flushed, and blood began to ooze from the cut surfaces. The torsion of a few vessels, the elevation of the limb, and a cold sponge or two quickly stanchd the blood. The ligatures used being carbolized and their ends cut short, the edges of the wound were sealed with the view of securing immediate union. This, however, did not take place, but whether this was due to the operation or to other causes I do not know. The sac was dense and lined by several layers of fibrin. The extravasated blood was firmly coagulated. The opening in the vessel was about the size of a darning-needle. It was my wish to apply the bandage, allow it to remain for some minutes, remove it, and note the effects on the aneurism; but to this the patient positively refused his consent. I shall certainly try it on the first suitable case. The patient left for his home, in a distant part of the state, the third day after the operation, with a healthy suppurating wound.

THE KENTUCKY STATE MEDICAL SOCIETY.—Our Kentucky readers, we trust, will bear in mind the annual meeting of

our State Medical Society, which is to be held this year at Shelbyville, on Tuesday, the 7th of April. These professional reunions increase every year in scientific interest, while their social influence is felt by its members to be of the happiest character, and in every respect the approaching meeting promises to be one of the best ever yet held. Shelbyville is the center of a refined and cultivated population, and from the earliest times has claimed a faculty worthy of its reputation for intelligence. Among its scholarly and excellent physicians the Society will have no trouble in finding an officer fitted in every way to preside at its meetings and represent it before the profession of our country.

The agents of Tiemann in this city have been authorized to promise that an assortment of the surgical instruments of that celebrated manufacturer will be on exhibition at Shelbyville during the meeting of the Society.

ARMY STAFF RANK.—The medical societies throughout almost the entire country have taken action in the matter of the rank and pay of the medical officers of the army, warmly urging upon Congress the increase of both—an act, it seems to us, of the simplest justice. The Boyle County Medical Society, one of the leading societies in the state, recently proposed the following resolutions:

“1. That this Society hereby expresses its hearty commendation of the recent memorial of the American Medical Association to Congress in support of a bill to increase the efficiency of the medical department of the United States army now before that body.

“2. That this society considers the passage of said bill simply an act of justice to one of the most important branches of the military service, composed, as it is, of gentlemen of the highest professional attainments and general culture, and whose duties are not to be outweighed in responsibility by any other arm of the service; that the members of it should hold the same rank and enjoy the same emoluments as members of the other staff-corps of the army.

“3. That we respectfully urge upon the member of Congress from this congressional district the support of said bill.

“4. That an authenticated copy of this resolution be forwarded to the Hon. M. J. Durham and the other congressmen and senators representing the state of Kentucky in Congress.”

MONSEL'S SOLUTION.—Dr. Joseph G. Rogers, of Madison, Ind., sends the following:

“A recent contribution to the *American Practitioner* highly praises the action of this agent as a styptic in hæmatemesis, and recommends its exhibition in doses much larger than justified by all previous authority. The following scrap of clinical history will support the eulogium and the doses.

“January 4th a case of typhoid fever in a young male adult came under my care, and progressed very favorably until the 14th, when a slight epistaxis occurred. This was stopped by a snowball applied externally, but the next day it re-appeared, accompanied by some bleeding from the mucous surface of the mouth, and a manifestation of numerous petechiæ over the abdomen and thorax. The patient was then ordered ergot, tannin, and lemon-juice in addition to the hydrochloric acid which he had been taking previously, and the persulphate of iron in solution and powder as a local application. A thorough trial of these means during a day and night produced no very satisfactory results; the bleeding was somewhat checked, but not entirely. On the morning of the 16th the nose was plugged and the epistaxis permanently stopped. At noon nausea ensued, which was soon followed by vomiting and purging of large quantities of black fluid, which under the microscope showed a heavy proportion of red corpuscles, which differed widely from the normal in being smaller and frequently very irregular in outline. The urine and blood from the mouth exhibited the same peculiarity. In three hours as many gallons of bloody fluid were ejected. The previous treatment was at once suspended, and thirty minims

of Monsel's solution were given in two ounces of ice-water every hour until five drachms had been taken. After the second dose the nausea and discharges stopped, and during the ten hours of its administration no disagreeable effects were produced by the iron save a very "puckered" state of the tongue and mouth. As a hæmostatic its success was signal. No hemorrhage occurred afterward; but, owing to the extreme prostration produced by the extensive internal transudation, concealed until its very bulk caused its ejection, on the fourth day thereafter the patient succumbed, notwithstanding every effort was made with stimulants, etc., to combat the asthenia. Perhaps had not the loss been so great, general, and sudden, the exhibition of the iron might have saved the patient from such a death. The lesson taught is that Monsel's solution may be given in very large doses without detriment, and with great advantage as an internal styptic."

DR. HENRY MILLER.—This eminent practitioner and teacher of medicine died at his residence, in this city, on Sunday, the 8th of February, in the seventy-fourth year of his age. For many years Dr. Miller has held the foremost place among the obstetricians of Kentucky, and a high rank among those in America noted for their skill in this line of our profession, having distinguished himself as much by his writings on obstetric medicine as by his ability as a teacher and practitioner. He was permitted to devote more than half a century laboriously to the practice of medicine, and during much the larger portion of that time his mind and studies were directed specially to the department of it in which he achieved his great reputation. At the period of his death he was the oldest physician in Louisville actively engaged in practice. Of all those whom he found in the field when he came to the city, forty years ago, he leaves but one behind him fit for active duty, and he survived all but one of his earliest colleagues—those associated with him in founding the medical

school in which he passed the most profitable years of his life. He was one of the connecting links, fast disappearing, between the present generation of physicians and the race which shaped medicine in the backwoods of Kentucky and organized medical education in the West.

Dr. Miller was born at Glasgow, Ky., on the 1st of November, 1800, beginning life with the century. He evinced early an aptness to learn, which was improved by the best seminaries of learning within his reach; and although he left school at an age when most boys are only beginning to study, he acquired a correct knowledge of his own language and no inconsiderable acquaintance with the Latin. He says of himself: "His education was not acquired in academic halls, but in the primitive school-houses of his native state, and upon the ample sward, shaded by forest-trees, appurtenant thereunto. So that, you see, he was reared after the fashion of Socrates—imbibing knowledge in the school-house, under the shade of trees, and not unfrequently perched upon their boughs."

He commenced the study of medicine at the early age of thirteen, spending six years in the office of his preceptor in Glasgow, compounding medicines and visiting the sick, before attending medical lectures. When he repaired at last to Lexington to attend a course in the Medical Department of Transylvania University, just organized, he was one of the most matured students in the class, though only then nineteen years old. He was graduated, at the end of his second course, in the spring of 1821, and a year later received the appointment of demonstrator of anatomy in the school. His superior mind and devotion to his profession gave assurance of eminence in it; but for some reason the professor of anatomy discouraged the idea of dissections by his pupils, and Dr. Miller declined, under the circumstances, to enter upon the duties of demonstrator. After practicing physic a few years in his native village he removed to Harrodsburg,

where, in addition to the population of the town, the springs (in charge of his old fellow-student, Dr. Graham) drew great numbers of wealthy visitors from the South, rendering the practice highly remunerative. But he was not yet satisfied with the theater upon which he was acting, and in 1833 came to Louisville, where a medical school had been projected. Dr. Miller was elected to the chair of obstetrics in the proposed school, the Louisville Medical Institute. For several years, however, the Institute did not go into operation, and during the time Dr. Miller devoted himself to general practice. When, in 1837, the citizens of Louisville resolved to endow the Medical Institute with a munificence which should place it on an equal footing with the best schools of medicine in our country, he was at once recalled to the chair of obstetrics, which, with great delicacy, he had resigned, in order that the board of managers might be left free in the selection of a faculty.

In this position he found all that he wanted for the development of his powers, and he enjoyed it for many years. It gave him pre-eminence in the line of his profession, to which he devoted himself by choice. During those years he wrote a work on obstetrics, the publication of which greatly extended his reputation, and his business from abroad, as well as at home, steadily increased. In 1858 he resigned his professorship, but returned once again to the school which he had aided in founding, only, however, to remain in it a single session.

Dr. Miller was remarkable rather for solidity than for brilliancy of intellect. He had wit, humor, and imagination; but the quality of mind which gave him his influence among men and his reputation as a practitioner was his clear, vigorous understanding. This imparted weight to his opinions on all subjects, and caused him to be sought oftener as a consulting physician than most of his professional associates. Withal he was a reader of medicine to the last, and kept

himself abreast with the improvements in his profession. About a year before he died he made a public profession of religion, and united with the First Presbyterian Church of this city. The following are some of the testimonials of respect to the memory of the deceased adopted by the profession of Louisville.

At a meeting of the physicians of the city the following resolutions were unanimously adopted :

“When in the providence of God distinguished men are removed by death from the scenes of their earthly labors it is the privilege of their associates and the duty of their friends to offer public testimony in their honor and pay just tribute to their memory. Prof. Henry Miller, of this city, having after a few brief months of illness been relieved of his sufferings by death, we, the physicians of Louisville, on this sad occasion do unanimously resolve :

“1. That we have heard of the death of our distinguished brother with sincere sorrow.

“2. That it is our pleasure to testify to his spotless character as a citizen, his great and deserved reputation as a practitioner, his uniformly honorable career as a teacher, his eminent success as an author, his unblemished record in his relations with his brethren, to the entire confidence inspired by him among the sick intrusted to his care, to the valuable services rendered by him to the many medical societies which he fostered and instructed, to his admirable observance of all professional rules and requirements, as the result of which he signally secured dignity and respect for that profession which he so eminently adorned.

“3. That we tender to his family our sincere sympathy.

“4. That we will attend his funeral in a body, and will unite with them and his many bereaved friends in performing the last sad obsequies in behalf of one whose memory his state, his country, and his profession will ever cherish with pride and admiration.”

Dr. Miller's colleagues in the Louisville Medical College published the following :

“Whereas, it has pleased Almighty God to remove from the field of his earthly labors our distinguished friend and colleague, the late Prof. Henry Miller ; and whereas it is the duty of all men

to take proper public as well as private action in honor of their distinguished dead :

“ Resolved, that we, the members of the Louisville Medical College Faculty, have heard with pain of the death of our distinguished associate, who for so many years has labored with us in the founding of this institution, of which Faculty during this entire period he has been the honored president.

“ Resolved, that we bear cheerful testimony to the eminent worth of the deceased in all of the varied relations of his past life, as a citizen of unblemished character, as a physician of deserved and thoroughly recognized distinction, as a teacher of uniform fidelity and efficiency, and as an author of well-earned and wide-spread reputation.

“ Resolved, that we attend the funeral obsequies in a body, accepting the invitation of his family to act as pall-bearers on this sad occasion.

“ Resolved, that the President of the Board of Trustees is invited to deliver, in memory of our late President of the Faculty, a memorial address on the evening of the approaching commencement exercises of this college.

“ Resolved, that we tender our sincere sympathies to the family of the deceased ; that a copy of these resolutions be sent to them, and they be recorded in the minutes of this institution.”

The Faculty of the Medical Department of the University of Louisville took the following action in regard to the sad event :

“ Whereas, we have heard of the death of Prof. Henry Miller, who was among the founders of the Medical Department of the University of Louisville, and who for more than thirty years (from 1837 to 1868) filled the chair of obstetrics in this institution ; whose name is affixed to hundreds of the diplomas under which the graduates are practicing ; whose earnest labors in the cause of medical instruction, and whose researches in medical science and admirable treatise on obstetrics won him a place in the foremost rank of medical teachers, practitioners, and writers of his time, and especially made his fame as an obstetrician world-wide ; therefore resolved,

“ 1. That in the death of Prof. Miller not only the profession of this city but that of the whole country has met with an inestimable loss.

"2. That we tender to the family our sympathies in their bereavement.

"3. That we attend his funeral in a body with the medical class.

"4. That these resolutions be spread upon our minutes."

A SENSIBLE PHYSICIAN.—The "Gold-headed Cane" relates that it was a maxim with Dr. Baillie that the most successful treatment of patients depended upon the exertion of sagacity or good common-sense, guided by a competent professional knowledge, and not by following strictly the rules of practice laid down in books, even by men of the greatest talents and experience. "It is very seldom," was he used to say, "that diseases are found pure and unmixed, as they are commonly described by authors; and there is almost an endless variety of constitutions. The treatment must be adapted to this mixture and variety in order to be as successful as circumstances will permit; and this allows of a very wide field for the exercise of good common-sense on the part of the physician."

THE AMERICAN PRACTITIONER.

APRIL, 1874.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them ; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way ; and we want downright facts at present more than any thing else.—RUSKIN.

Original Communications.

PUERPERAL INSANITY.*

BY J. B. STONEHOUSE, M. D.,

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A consideration of puerperal insanity is interesting from the rarity of its occurrence, the absence or obscurity of its premonitory symptoms, the difficulty of treatment, the uncertainty and often fearful termination of the disease.

According to the strict significance of the term puerperal insanity, this article could treat only of those cases which occur during or within a few days or weeks after delivery ; but by usage it has come to include instances of mental derangement originating during the periods of utero-gestation, parturition, and lactation. The late Dr. Skelton, in the *Morrisonian Lectures for 1873*, published in the *London Journal of Mental Science* for October, 1873, abandons the term, and divides it into puerperal insanity, insanity of lactation, and insanity of pregnancy. While the term is decidedly an inap-

* Read before the Albany County Medical Society, February, 1874.

propriate one, it is necessary to treat of these cases together, because of the intimate connection of these three physiological stages, and the almost inseparable connection of their etiology and pathology. The most usual division of the subject is according to the periods of pregnancy, labor and its consecutive state, and lactation. Another division is ephemeral insanity, melancholia, and mania. The latter classification is faulty, because it does not take cognizance of the peculiar circumstances under which the disease is developed, and dependent upon which is the treatment and prognosis. We will then consider insanity of pregnancy, puerperal insanity, and insanity of lactation.

The period of pregnancy is understood to extend from conception to delivery, the period of labor from labor to the end of the second month, and the period of lactation from the second month after delivery.

Of the fifteen cases of puerperal insanity upon the consideration of which I found these remarks I propose to offer, thirteen were married women; ten were between the ages of twenty and forty, three were under twenty, and two had passed forty; eight were primiparæ, four cases occurred during the second pregnancy, one during the third, one the fifth, and one the eighth; the youngest was eighteen, the oldest forty-seven years of age; in four cases there was history of heredity, the insanity in all cases occurring on the maternal side; in five cases hereditary neuroses other than insanity were found, and in the remaining six no heredity could be traced; in six cases the patient had suffered from nervous disease previous to the attack, and in one case an attack of chorea ceased as the mental symptoms came on; two cases proved fatal, one from dysentery and one from maniacal exhaustion; four cases are at present in institutions, and considered incurable; nine are recovered; of the four incurable cases, one is in a condition of dementia, and the others are classed as suffering from chronic mania; of the fifteen cases, six

occurred during pregnancy, three during labor, and six during lactation.

Now allow me briefly to detail the cases which appear to me to be representative of the several varieties, course, and termination.

CASE I. H. J. P., aged thirty years, second pregnancy, married five years. Patient exhibited symptoms of mental aberration during the fourth month of pregnancy; fears of poverty and death, with perverted appetite, craving raw meat, etc. Symptoms developed rapidly, and from the fifth month to the time of labor the patient continued in a condition of extreme melancholia without suicidal propensities. During labor, however, she exhibited considerable interest, and immediately took the child to breast, and to the close of lactation showed no other symptoms of mental disturbance. The patient has suffered several times from very severe hemicrania. Parents and collaterals free from any nervous taint, while they are decidedly phthisical. This patient entered an institution during the fifth month of her pregnancy, and was discharged one month afterward.

CASE II. G. S., German, aged twenty-three years, married one year, primipara. During an instrumental delivery she became violently excited, charged her husband with attempts to murder her with the forceps, and tried to choke the physician while applying the bandage. It became necessary to use the camisole for the safety of the household. Under medical treatment she quickly recovered her former mental condition, having been deranged and under restraint for about two weeks. She did not nurse the child. She is again pregnant. No heredity could be traced, and no nervous affections in her previous history.

CASE III. Deliah H., aged thirty-nine years, married two years, first pregnancy. During utero-gestation the patient was very suspicious and apparently very religious; was not considered by her relatives to be in sound mind. Labor was

not very difficult nor marked by any special mental symptoms. During lactation patient complained of headache in the frontal region. Anæsthesia, partial, was noticeable for a few days at several periods. Mental symptoms increased in intensity, several attempts were made at suicide, and in the fourth month after delivery, by advice of the family physician, she was removed to an asylum. A year has passed, and the patient is in a state of profound dementia. During the past summer she suffered from a severe dysentery, and became extremely debilitated and had bed-sores. Following this was an obstinate constipation with atony of the bladder. I have heard from the patient lately, and there is no hope of her recovery.

CASE IV. L. F., of German descent, aged eighteen years, unmarried, primipara. The patient was of a wealthy family and the oldest of eight children, three of whom suffered from epilepsy and two died in infancy from convulsions. Patient was first attacked when she was ten years old. Her mother and several other relatives on the mother's side also give histories of nervous heredity, while a brother and aunt of the mother died at an asylum of epileptic insanity. The patient being of weak mind and morals fell an easy prey to a man much her senior. During pregnancy she exhibited no unusual mental symptoms. During labor, however, she became wild and incoherent in her talk. In the course of a week she was dangerous to herself and attendants, requiring the use of the camisole continually. The fauces became extremely congested and swollen from the violent and constant screaming. Insomnia was almost unmanageable, and only while under the effects of the most powerful soporifics did she rest from her delirium. Forty-five grains of chloral and a drachm of the saturated tincture of hyoscyamus would scarcely produce rest for half an hour. Beef-tea, whisky-punch, and medicine were given, either by stomach-pump or by enema, according to the excitement of the patient. Hypodermic

injections of morphia, even to the extent of half a grain, produced no effect, although repeated within an hour. On the thirteenth day after labor the patient died from exhaustion.

CASE V. M. E. P., aged twenty-seven years, married, primipara, family strongly nervous. During pregnancy premature labor was threatened twice. Labor was without any specially unfavorable symptoms. In the fifth week of lactation the patient first showed signs of mental aberration, refused food, could not be induced to utter a word. Fæces and urine were passed apparently without her knowledge. She sat in her chair with her hands upon her knees, her eyes cast upward, and her mouth open. It became necessary to force alimentation and medication. Extreme insomnia and debility also further complicated the case. Under treatment she became steadily better until the third month of lactation, when she was discharged cured.

A few words as to the etiology of these affections. In Westminster and Queen Charlotte's hospitals, London, among fifty-five hundred women confined, only twenty were attacked with the disease during their residence in these institutions, and in others the proportion has been smaller. These facts, however, do not show the whole number attacked. As the time spent in lying-in hospitals after delivery is usually very short, and those women attacked with insanity during pregnancy are seldom, if ever, delivered at an institution. Dr. Gundry, from collected cases, gives 1,434 cases of puerperal insanity in 16,109 cases admitted to insane asylums.

Among the causes hereditary predisposition appears to be the most important. This heredity, not only to insanity but to other nervous disease, it is important to remember as occurring generally on the maternal side. Dr. McDonald reported sixty-six cases, seventeen of which, or about twenty-five per cent, gave histories of family predisposition. Dr. Gundry reports twenty-two out of fifty-six patients, or about fifty per cent, who were predisposed by heredity. Of my

own cases four were descended from families with undoubted taint of insanity, or about thirty-three per cent. This gives an aggregate of one hundred and thirty-seven patients, of whom forty-three were predisposed to insanity.

Constitutions enfeebled by alcoholic or sexual excesses, or by organic disease, are predisposed to attacks of puerperal insanity. Another important but decidedly difficult point to observe is the moral and mental habits and surroundings of the patient; and perhaps it is well to notice here the fact, presented especially by the French alienists, that unmarried women are much more liable to attacks of puerperal insanity than the married ones. The sad amount of illegitimacy which is said to exist in Paris has added greatly to the number of these insane during the periods under consideration. The injurious effects of painful emotions were so well known in ancient Rome that it was the custom to suspend a crown from the doors of houses where women were in labor to indicate that such houses were to be held sacred from all intrusion. It is difficult to estimate the effects of education and culture in this phase of insanity. Statistics on this point are meager and unsatisfactory, but I think I may safely say that, allowing the manner of living to be in two cases equally conducive to physical health, the better educated woman is the least liable to puerperal insanity. Under this head may be classed those cases where the attack is immediately preceded and evidently caused by some powerful mental impression, and also many cases which arise during instrumental deliveries. Dr. Marcé attributes puerperal insanity to the constitutional disturbance attendant upon pregnancy and the establishment of the lacteal secretion, and to the general shock to the nervous system which is the direct consequence of labor. Dr. Gooch's theory of its dependence upon the peculiar state of the sexual system which occurs after delivery, and Dr. Storer's *reflex insanity*, are all of similar explanation, and deserve careful attention in deciding the causation of the disease.

A writer in Winslow's Psychological Journal gives another very similar explanation. He attributes the origin of the mental aberration "to reactions between a system predisposed to such derangements and the normal physiological conditions which are found after confinement; just as in constitutions predisposed to tetanus or nervous delirium these will be developed after the slightest accidents or operations." The special influence of the physiological changes undergone by the uterine and nervous systems is a very interesting field for study. During pregnancy new functions are assumed, new relations between the nervous centers and the growth and nutrition of the uterus are being formed. The not uncommon advent of diseases of the kidneys, lungs, etc.; the change of habits necessitated by the conditions of the patient—all culminating in the peculiar and supreme nerve tension of the stage of labor, followed immediately, it may be, by exhaustive hemorrhages and the drain of lactation—form a chain of causes whose existence renders the escape of a single woman mysterious and providential. Dr. Marshall Hall claimed for anæmia and exhaustion the principal places in the causation of puerperal insanity. Undoubtedly these conditions enter into many cases, but the claim can not be substantiated. Sir James Y. Simpson raised the point of the connection of puerperal insanity with albuminuria. The statistics of observers do not show any proofs of this theory, and in the three cases of my fifteen in which this question was investigated no traces of albumen could be detected.

The symptoms of the three varieties of puerperal insanity do not present any very characteristic points. Melancholia is most frequently the type of the disease in the period of pregnancy; perverted appetites, suspicions, fears, and perversion of the moral element is often noticeable. Dr. Bucknill says: "Every medical man has observed the extraordinary amount of obscenity which breaks forth from the most modest and well-nurtured woman under the influence of puerperal

mania; and although it may be courteous and politic to join in the wonder of those around that such impurities could ever enter such a mind, and while he repudiates Pope's slander that 'every woman is at heart a rake,' he will nevertheless acknowledge that religious and moral principles alone give strength to the female mind; and that when these are weakened or removed by disease, the subterranean fires become active and the crater gives forth smoke and flame."

Dr. Marcé gives the case of a woman who became hydrophobic soon after conception. She could neither drink nor bear any one else to do so in her hearing, nor could she cross a stream of water.

Of one hundred and fifty-five cases collected by Dr. J. Batty Tuke, twenty-eight occurred during pregnancy, over twenty per cent. In my cases six occurred during pregnancy. Of seven hundred and eighty-three cases reported by McDonald, Gundry, Marcé, and others, only sixty-five cases occurred during utero-gestation. Of Dr. Tuke's one hundred and fifty-five cases, seventy-three occurred during the period of labor; of my fifteen cases, three occurred during labor. The mental symptoms are generally of the maniacal type, and may be either ephemeral, occurring during the passage of the head from the os uteri or from the os externum, or it may come on later and last longer. Fifty-four of Dr. Tuke's cases and six of my own occurred during lactation. The melancholic type predominates during this period.

Puerperal insanity is the most favorable for recovery, while insanity of lactation is least so. The prognosis is unfavorable when inflammatory conditions accompany or supervene upon the mental aberration; when the strength of the patient is diminished by organic disease, exhaustive discharges, and maniacal excitement.

The treatment differs very little from that of other similar cases of non-puerperal insanity. Where it is possible narcotics should be avoided in the treatment of puerperal insanity, is

the statement of Sir Jas. Y. Simpson; warm baths and alcoholic drinks serving to quiet the patient and procure sleep. This is not always possible, and then chloral, bromide of potassium, conium, and opium may be relied on. A useful combination is a solution of chloral with a saturated tincture of hyoscyamus. The non-appearance of the menses at the normal period should be considered an indication for medication to that end. Tonics, stimulants, and nutritive articles of food should be given when called for by the condition of the patient. Blisters and other counter-irritants are often of the greatest importance.

NEW YORK.

SUGGESTIVE CASES TREATED BY ELECTRICITY.

BY GEORGE M. BEARD, M. D.

One of the ablest general practitioners that I ever knew, a gentleman of somewhat advanced life and of immense experience, remarked to me the other day that he was continually meeting with unexpected forms of disease, and that almost every case taught him something new. If this be true of the experience of general practitioners, it is just as true of specialists. The electro-therapeutist is always learning. Even his failures are instructive; cases that are poor in results may be rich in suggestion. Every step of our march is a fresh surprise. Indeed I may say that the larger and more varied the experience the more fruitful and suggestive each new experience becomes.

The following cases all taught me something, and their brief recital may perhaps be of service to others.

ATROPHY OF THE UTERUS—SCANTY MENSTRUATION—STERILITY—INCREASE IN THE SIZE OF THE ORGAN AND IN THE AMOUNT OF THE MENSTRUAL FLOW UNDER INTERNAL FARADIZATION AND CENTRAL GALVANIZATION AND GENERAL FARADIZATION.

Mrs. P., a young married lady, was referred to me, January 17, 1872, by Dr. Fordyce Barker, for the symptom of sterility. According to Dr. Barker's diagnosis there was atrophy of the uterus, and he was in the hope that electrization might, by improving the nutrition of the uterus, perhaps remove the sterility. It was supposed also that there might be atrophy of all the generative organs, since the menstruation was defective, though regular, and the patient was withal quite anæmic. I treated the patient for six weeks by internal faradization of the uterus, with my intra-uterine electrode, through the speculum; external faradization over the back and the region of the ovaries; general faradization and central galvanization occasionally. The patient came every other day. Internally she took iron and strychnine.

At the first menses after treatment the patient remarked an increase of quantity, and the courses were on her one day longer than usual. By the 1st of March, after six weeks' treatment, Dr. Barker found on examination that the uterus had increased in length one quarter of an inch. The patient after an interval was again treated, but without any further local improvement.

The modification of nutrition caused by electricity may have two opposite effects; it may cause increase or it may cause diminution in the size of a part or organ. Where the part is abnormally large it causes it to grow smaller; where it is abnormally small or atrophied, as in the above case, it causes it to grow larger. In these opposite results there is nothing inconsistent; they are readily explained by the changes in nutrition caused by the current.

FACIAL SPASM OF ONE YEAR'S STANDING AGGRAVATED AT THE MONTHLY PERIODS—DECIDED TEMPORARY RELIEF UNDER LOCAL AND CENTRAL GALVANIZATION.

Miss F., a young lady twenty-four years of age, was referred to me by Dr. Dudley, December 12, 1871. The patient had suffered for one year from spasm of the muscles by the side of the nose, and also of the orbicularis on both sides. The spasms varied with the general health; that is, they seemed to grow *worse as the general condition improved*. Just before and during the monthly periods they were usually much worse.

I tried local galvanization with very mild currents, alternating with central galvanization. Strong or even medium currents at once aggravated the spasm, while mild and short applications at once gave relief. There was, however, a continual tendency to relapse. Perhaps a week or more she would be apparently well, then the spasms would return in full force. I treated her by intervals for months with no more than temporary benefit.

The above case suggests two thoughts: 1. That functional disturbances in women are usually worse at or just before the time of the menses; 2. That local spasmodic affections of a chronic character, though they may be speedily relieved by electricity, are yet very relapsable. This is true of all local and long-standing spasmodic affections, wherever situated. When these affections are recent and mild they may be permanently cured by a skillful use of electricity; but inasmuch as they are comparatively painless affections, and steal upon the patient like a thief in the night, they but rarely come under the care of the electro-therapist until they have existed for months and years. One reason why general chorea as it occurs in children gives way to electrical treatment is that it is almost always taken in hand much earlier than local chorea.

I may remark here that spasmodic affections of all kinds, local and general, chronic and recent, mild and severe, should usually be treated with *mild* currents, uninterrupted, and by short applications.

The following was one of those cases where electricity seemed to agree most happily with the *temperament* of the patient.

SUBACUTE RHEUMATISM COMPLICATED WITH NERVOUS DEBILITY OF THREE MONTHS' STANDING—IMMEDIATE RELIEF OF PAIN AND RAPID INCREASE OF STRENGTH UNDER THREE WEEKS OF GENERAL FARADIZATION AND CENTRAL GALVANIZATION.

Mr. H., aged thirty-five years, was referred to my care by Prof. C. A. Budd, October 22, 1872. Nervous rheumatism was a life-long heritage of the patient. The present attack seemed to have been excited by prostration from the heat of the sun about three months before. The patient on the day I first saw him was confined to his house and to his bed by stiffness, pain, and debility. His appetite was poor, he had lost some flesh, and sleep was obtained only by opiates. After the first application of general faradization, which was given in bed, he slept without opiate. Every application much relieved him. Central galvanization was used a part of the time, and seemed to do better than general faradization. Under the combined treatment he rapidly gained in strength, and soon was able to walk out. An attack of vomiting, brought on either by a too strong faradization or by the digitalis that he was taking, caused a relapse, from which he gradually recovered.

Cases like the above suggest the query whether there are not certain *temperaments* for which, without reference to the disease from which they suffer, electricity acts as a specific. More and more I am convinced that it is the temperament even more than the special symptom that is to be considered in all electrical treatment. I am disposed to believe that electricity would act well for Mr. H. in almost every conceivable form of disease, at least of the subacute or chronic character.

The necessity of making careful examination of the uterus in some obstinate forms of neuralgia is powerfully shown by the following experience.

FACIAL NEURALGIA OF LONG-STANDING DEPENDENT ON UTERINE DISEASE—
NO RELIEF FROM LOCALIZED GALVANIZATION—GREAT RELIEF UNDER
LOCAL TREATMENT OF THE UTERUS.

Miss R., a young lady about eighteen years of age, was referred to me, September, 1871, by Dr. Newton. The young patient was of a frail and nervous build, and for one year had been a sufferer from facial neuralgia of the right side that never let up. Sometimes the pain extended to the left side. For four years there had been more or less neuralgia, but for a year the pain had been constant. There was spinal irritation, more or less insomnia, and bad nutrition. I treated the sufferer by localized galvanization and faradization through the base of the brain, from one mastoid process to the other, and from the chin through the affected nerve. Central galvanization and general faradization also were used. There was no improvement. The mother of the patient now informed us that at one time there had been some uterine disorder, or, as she expressed it, "weakness or whites." I then took the case to Dr. A. J. Skene, who made a careful examination, and found vaginismus, or a condition approaching it, with antelexion probably of long-standing, and *uterine congestion*. Dr. Skene treated the patient locally in various ways, and soon there began to be remissions of pain for fifteen minutes. The intervals increased until the patient appeared entirely well. Months afterward there was, we learn, some relapse.

The following is typical of certain obstinate temperaments that every now and then cross the track of the electrotherapeutist.

SEVERE NEURALGIC PAINS IN LEGS, PROBABLY DUE TO CONGESTION OF CORD,
ADVANCING TO SCLEROSIS, AGGRAVATED BY ERGOT AND NOT BENEFITED BY
GALVANIZATION OF SPINE.

Mr. S., an engineer on one of the Union ferry-boats, was referred to me, April 14, 1873, by Dr. Conkling. The patient, who was forty-two years old, was of a strong and hardy frame, but in his past life had suffered much from what he

called gravel and kidney trouble. His calling as engineer—sometimes on night duty—caused him to be considerably exposed and to be physically overworked. The symptoms when he consulted me were severe neuralgic pains down both legs, unilateral sweating, and sweating over the lumbar vertebrae. The neuralgic pains were of a sharp, shooting, stabbing character, such as we see in spinal congestion and sclerosis. Overexertion and sitting up at night made the pains severe. Galvanization of the spine and general faradization seemed to have little permanent effect. A dose of ergot (one drachm of the fluid extract) caused a feeling of tingling and pricking in his legs, and also pain in his back. The patient abandoned treatment, his occupation being so much against him that there was little inducement to persevere.

Possibly in the above case the temperament contra-indicated electricity. It is generally possible to relieve the pains not only of spinal congestion, but of posterior spinal sclerosis, even when the disease is not permanently cured.

INJURY OF SHOULDER, STIFFNESS, AND PAIN—RAPID AND PERFECT CURE
UNDER LOCAL GALVANIZATION.

The wife of a physician, a lady of middle life, consulted me, February 2, 1872, for an injury of the right shoulder of many months' standing. The stiffness was so great that she could not raise her arm to her head except with great difficulty. The pain was severe. Liniments had done nothing, or but little. About a month of treatment by local galvanization with strong currents—for she bore electricity well—gave rapid relief to the pain and stiffness and a permanent cure. The electrodes were applied all around the joint in all directions with wet sponges, and the application continued until the skin was quite red. The cure was complete, and there was no relapse.

In this case the electricity was borne in very large doses. There seemed to be no limit to the amount that she could receive without the injurious effects. In another similar case it might be necessary to use very gentle currents and only short applications.

INFLAMMATION OF CONJUNCTIVA FOLLOWING IRIDECTOMY—PERIODIC PAIN
AND EXACERBATIONS—RELIEF UNDER GALVANIZATION.

Mrs. L., sister of a physician, was placed under my care by her brother, June 14, 1873. The patient, a lady of middle life, was a great sufferer every third day from exacerbations of pain and inflammation in an eye that had been operated on by iridectomy. I recommended and used galvanization, locally applied, for the purpose of relieving the symptoms. June 17th, the pain was relieved during the attack; June 23d, no regular exacerbation as yet; June 29th, an exacerbation, but less severe than usual, came on; July 7th, has had only one attack; July 21st, has not had an attack for a week. Later in the summer the

patient went to the country, when she again suffered, but in October she was again very much better.

In the above case two points are shown: 1. That *pain* as a symptom merely may be treated in cases that are of necessity incurable; 2. That periodic attacks may be aborted.

Sciatica in its relation to electro-therapeutics appears under two general forms: those which are quickly cured, and those that give way very slowly and under protracted treatment.

SEVERE AND OBSTINATE SCIATICA EXCITED BY OBSTRUCTION OF THE BOWELS—RELIEF AND SLOW IMPROVEMENT UNDER LOCALIZED GALVANIZATION WITH MOISTENED SPONGES, CLOTHS, WITH THE METALLIC BRUSH, AND GALVANO-PUNCTURE.

Mr. K., aged thirty-nine years, was referred to me, March 3, 1873, by Dr. Conkling. The patient had been occupied by various and complex affairs, and had been for years bearing the burdens of ten men. His vacations had been few and his hours of labor many, and he had fallen into a condition of profound neurasthenia. He had suffered from gastralgia of a most violent character, for which opiates had been quite freely given; and constipation and hardened feces had resulted that had caused obstruction of the bowels, which was relieved only with difficulty and by mechanical means.

The sciatica of one side, from which the patient was suffering when I was called in, seemed to be of a reflex character from the constipation. The pain was fearful, and there was, of course, lameness and atrophy of the muscles of the leg. At times excessive hyperæsthesia appeared over the thigh, especially in the region of the sciatic nerve, and there was great tenderness.

I tried various methods of electrization; general faradization, for the patient was much debilitated; localized faradization with sponges and with the metallic brush; central galvanization, that certainly was of service, generally and locally; localized galvanization, and galvano-puncture.

Localized galvanization with currents of medium strength, and continued for an hour or so just as the patient had retired for the night, seemed to be more efficacious than any other method or manner of treatment. Almost always it soothed the pain, relaxed the stiff and aching muscles, and this relief would last for hours, perhaps give a good night's sleep. The proceeding was to place one pole on the spine, and to pass the other, without regard to the direction of the current, up and down over the region of the sciatic nerve.

A few times I tried galvano-puncture with insulated and non-insulated needles. The needles were thrust in quickly and firmly until they came near the nerve, and sometimes they touched it, as was evidenced by the tingling and pricking sensations excited that were felt down the leg. The punctures were made on various points down the back part of the thigh. No anæsthetic was used, but once or twice local anæsthesia by means of carbolic acid and ether.

I was persuaded that this treatment by puncture did good; that it gave the patient a start, and enabled the external galvanization to do its work at better

advantage. The patient, though a man of strong will and decision, terribly dreaded the thought of the needles, and I was obliged to abandon their use. The needles were always connected with the negative pole, the positive being applied externally by a sponge or cloth cover.

This case was treated off and on for four months, and with slow and not very steady improvement. It was a long time before the patient could ride or sit long without causing pain. In a few weeks he completely recovered.

NO. 8 WEST THIRTY-SEVENTH STREET, NEW YORK.

ELECTROTHERAPY.

BY JOSEPH G. ROGERS, M. D.

For the advancement of this comparatively new though very important branch of medical science nothing is so much needed at present as the publication of clinical results. The extensive reports of Remak, Duchenne, Althaus, Hammond, Beard and Rockwell, and others constitute a rich mine of facts; but every practitioner who uses electricity can and should add his mite. With this thought in view the few following cases are offered.

CASE I. *Sciatica*.—A laundress, aged fifty years, ordinarily in good health, had suffered for three months from sciatica of right side, probably due to exposure to cold and moisture; often in bed for many days, and unable to work at any time. A descending current from ten cells, protracted during twenty minutes, gave almost entire relief for a day, after which the pain returned, but was less acute. Three days later another sitting produced a like result, the pain returning after some hours, but still less severely. Two weeks later two more

similar applications were made. After these the slight soreness then remaining gradually disappeared, and there has been no return of it during the year following. This case, which did not receive very regular attention, shows that the best effects of electrization often appear some time after the applications have been made.

CASE II. *Sciatica*.—I myself became a sufferer from this distressing neuralgia, four months since, as a consequence of a sudden wrench of the right thigh. Being desirous of studying the natural history of the disease, I permitted myself to suffer the extreme pain and lameness, without any effort at treatment, during a whole week; but then, being obliged to make a long journey, I concluded to try positive means, and made a twenty-minutes' application of a descending secondary faradic current. The next day the lameness was much lessened, and on the third it was gone. During this trip I was much exposed to cold, and was obliged to walk unusually much, but felt not a single twinge, nor have I since.

CASE III. *Coccygeal Neuralgia*.—A young lady, invalid for years with hip-joint disease and necrosis of shaft of femur, recovered from these troubles after an operation for enucleation. Some months later she was attacked with pain in the coccyx and extending down the sciatic nerve of the lame side. This gradually increased during two weeks, withstanding various means, external and internal, which were used to quell it. During a single night as much as three grains of morphia were required to procure sleep. On the fifteenth day, the pain being violent, a mild primary descending faradic current was applied for ten minutes, including the coccyx and whole of lame leg. During the application the pain disappeared; six hours afterward it came again. The next day an application was made during twenty minutes with the secondary current. The relief was more permanent. The patient slept well during the following night. A second

application next day of the same current caused complete cessation of the pain for a whole week. It then returned, after fatiguing exercise, with its original severity. Four bi-daily applications, however, entirely and permanently cured the trouble.

CASE IV. *Brachial Neuralgia*.—A middle-aged man, otherwise healthy, had been suffering for three months with pain along the course of the radial nerve, most intense at a point just between the first and second metacarpal bones. During this period the patient had taken various internal remedies of an anti-rheumatic nature, prescribed by his physician, with no effect whatever. His nights were often sleepless and manual labor was always painful. On his presenting his case to me I applied the secondary faradic current part of the time directly through the hand, and then again with the positive pole over the painful spots and the negative in the other hand. Five sittings within two weeks permanently cured the neuralgia, and there has been no recurrence, three months having since elapsed.

CASE V. *Peripheral Paralysis*.—A middle-aged laborer, under the influence of too much beer, slept several hours with one leg hanging over the sharp edge of his bed. On awaking he was unable to use that leg in walking, it being paralyzed below the knee and in a state of complete anæsthesia. After the lapse of a week he was able to walk, but only with great effort. The paralysis had given place to paresis, and the complete loss of sensation to a numbness, attended by a very painful tingling, which prevented the patient from sleeping. This condition remained during an additional period of two weeks; meantime he had no medical attention. Presenting himself to me at this time, I applied a strong secondary faradic current for twenty minutes, the electrodes being moved slowly to and fro over the entire surface of the leg in parallel lines a few inches apart during part of the sitting, and an ascending current being sent

through the popliteal nerve and its branches during the remainder. The improvement was immediate, and three daily applications entirely restored the limb to its normal condition.

CASE VI. *Spinal Congestion*.—A young man of healthy appearance presented himself with the following history. Five months before he had been exposed to intense and prolonged cold, and subsequently experienced a gradually increasing failure in general muscular power, attended by numbness of the extremities and tingling sensations in various parts of the body. There was also pain in the spine, increased by lying in a recumbent posture, headache, loss of appetite, constipation, and insomnia. These symptoms had persistently increased during the mentioned period. When first seen he had the "grip" of a feeble child, and could walk but very slowly and unsteadily. During two weeks I gave him ergot and bromide of potassium, with an occasional laxative pill. He slept better and had less back and headache; his appetite improved; the paresis and anæsthesia remained the same. At this time all medicine was stopped, and applications of the continuous descending galvanic current from ten cells were made—including the spine, extremities, and sympathetic system—twice a week for two weeks. Each sitting produced a very decided improvement in all the symptoms temporarily and to a less extent permanently. At this time the secondary faradic current was substituted for the galvanic, and the patient declared at once that it had a superior effect, increasing his power of motion and sensation in a very marked manner. This, in alternation with the galvanic, was used twice a week for four weeks. At the end of this time the patient declared himself well; and having been permitted to squeeze my hand instead of a dynamometer, forced me to accede to that proposition as far as applied to the resumption of normal muscular power. During the following six months he remained well; but a few days since he presented himself with the same

symptoms in a mild form. Under the same treatment as before he has already improved.

CASE VII. *Scapular Myalgia*.—A vigorous middle-aged brick-layer, after a violent struggle with a bellicose workman on a narrow scaffold forty feet high, found himself the next day suffering from great soreness and pain in the scapular region. This continued for a week, disabling him from work. Presenting himself for treatment at this time, I applied a descending primary faradic current over the disabled parts during ten minutes. Immediately there was almost complete relief, and another similar application later in the day dissipated the trouble permanently.

CASE VIII. *Crural Neuralgia*.—A rather corpulent middle-aged man descending some steps suddenly felt a severe pain in the groin of one side, which was immediately followed by lameness of the thigh. This had been continuous during more than a year, when he was seen by Prof. Bartholow. He applied the continuous galvanic current one time with immediate benefit. This was not permanent, however. Two weeks later I began a course of electrization, which was continued rather irregularly during two or three months, having from one to three sittings a week. During this time I used at first the primary faradic, afterward the continuous galvanic, and lastly the secondary faradic current, always descending. After each sitting the range of comfortable motion was greatly increased and the pain almost entirely removed. This improvement was always more noticeable after the secondary current. At the end of three months' treatment under my hands the patient supplied himself with a faradic apparatus, and has since—a period of six months—occasionally made the applications himself. The improvement has been very slow but constant. No pain is now experienced except when the limb is strongly flexed or abducted. The temperature of the limb, which before was lower than that of the other side, is now normal. A perfect cure in this case is not

expected, but there has been very great benefit derived from the electrical treatment.

The few foregoing cases are cited mainly to support the statement that in my hands at least the secondary faradic current has exhibited more efficacy in the relief of neuralgia than the continuous galvanic, and at least as much in the merely congestive lesions of the spinal cord. In those conditions where there exists a more positive change in the nerve tissue—as in sclerosis, for instance—the greater electrolytic power of the galvanic current may be demanded; but in such cases we can scarcely expect benefit from any agent. Dr. Anstie, in the Practitioner of last June, declares very positively that faradization is worse than useless in neuralgia. Dr. Beard suggests that much depends on the smoothness of the current and the mildness of the application. The instruments used in the above cases were those of the Galvano-faradic Company, and the currents never painfully strong.

MADISON, IND.

ON SOME OF THE THERAPEUTIC USES OF ARSENIC.*

BY COLEMAN ROGERS, M. D.

Morgani has remarked that the habit of observation is the foundation of the healing art. It is one of the reproaches of modern medicine that its disciples are so prone to extol the virtues of new remedies, or at any rate those agents whose therapeutic value has not been demonstrated by clinical research and long experience. As a result of this the materia medica is filled with useless drugs, while many of the old remedies have fallen into unmerited neglect. Positive harm is thus done, first, by the multiplication of means for an end,

* Read before the Louisville College of Physicians and Surgeons.

which causes doubt and confusion; and secondly, by leading us to overlook many of the agents used in the treatment of disease which have in times past afforded us and those who have preceded us most excellent results.

It is true that by careful trial, cautious and well-conducted experiment, our pharmacopœia has of late years been enriched by the addition of many new and valuable remedies. As an instance we need only cite the brilliant results obtained from the bromides in certain nervous affections, and from the chloral hydrate as a hypnotic. But it is none the less true that from hasty generalization, and attributing marvelous powers to certain medicines after observing their effects in only a few cases, we are burdened with much that is hurtful and more that is useless.

Our periodical literature teems with accounts of the high therapeutic value of various drugs, but how few of them retain a permanent place in the confidence of the profession generally! If we study carefully the pages of well-recognized authorities or consult our own experience, it is astonishing to find how rare are the instances in which direct curative effects can be attributed to any one drug. Read through, if you will, Flint or Watson, Aitken or Niemeyer, and it will be found that only in the instances of opium, quinine, and mercury can cure be said to follow the agent employed as a certain *post hoc ergo propter hoc*.

In the course of a recent able article contributed to the American Practitioner, entitled "Tolerance of Disease," Dr. Flint gives utterance to the following: "In the treatment of chronic diseases how few are the known remedies which are directly or specially curative! We have some such remedies: quinia and arsenic in malarial affections and in certain cases of neuralgia, mercury and the iodide of potassium in syphilis, the bromides in epilepsy, at once rise in the mind and bear testimony to the truth of this assertion, but it would be difficult to extend the list much."

Somewhere in the writings of Hughes Bennett that author gives a list of those agents which he considers positively curative, and if we remember correctly it embraces opium, quinine, mercury, iodide of potassium, and arsenic.

To one of these established remedies—arsenic—we propose to call attention, not by way of adding any thing new to what is known concerning its powers, but with the object of giving a summary of some of its important therapeutic uses, and directing particular attention to certain forms of disease in which it is indispensable, and to others in which its action has been invoked of late with results as gratifying as they are surprising.

If the long-standing of a remedy give any importance to it, arsenic is entitled to its share of attention, for as a medicinal agent it is as old almost as the hills from which it is extracted. Used long ago by Dioscorides as a remedy for cough, always a favorite drug with the Chinese, it reached its greatest celebrity, in 1786, in the hands of Fowler, an Englishman, as an antiperiodic in the treatment of malarial diseases. From this time it was generally taken up, and particularly by Haygarth, Jenkinson, and Begbie, until now we find its use extended to various and dissimilar morbid conditions, the sheet-anchor in some and an agent of superior efficacy in others. That it is destined to become one of our fixed and valuable resources must be manifest to all familiar with the medical literature of the past decade.

Arsenic as a remedy is not now confined to malarial and cutaneous diseases as formerly; but whether it is used in affections of the nervous system or those of the respiratory, circulatory, or digestive organs, or in uterine complaints, in whatever direction we turn we find those who attribute to it marked and manifest beneficial effects. Many of these observations may be founded upon an uncertain basis, and much of the laudation of the remedy may be traced to extravagant expectations; but where so much power is attrib-

uted to a drug under so many diverse conditions there must be several grains of truth somewhere.

Arsenic is credited with several peculiar modes of action. It is said to be a tonic, alterative, and antispasmodic, with special tendency to the nervous system, as a modifier of functional disturbance there, from whatever cause arising. It is difficult to determine in what its primary action consists or where it begins. It may be upon the blood, and through the blood upon the nerve-tissues, that we have to explain the favorable modification of nutrition which it is said attends its use. Headland asserts that it behaves as a catalytic in diseased states, removing from the blood and tissues any thing that is foreign to them, and in this way he explains its influence upon certain convulsive, malarial, and cutaneous diseases. By this catalysis no change takes place in the arsenic itself, but its simple presence furthers the removal of peccant matters.

It is not claimed that arsenic is a true tonic and restorative in the sense that iron is, for its existence as a proximate principle of the tissues has not been demonstrated. The salts of iron exist normally in the blood as constituents of the blood-corpuscles, the depots for the supply and conveyance of oxygen to the tissues. But from some recondite power authorities aver that arsenic in small doses increases the appetite; that under its influence the whole organism is invigorated, the muscular system rendered more active, and nutrition in general improved. These effects are the same, at any rate, as from the so-called true tonics, whether or not we may explain them on physiological principles. If it does not add any thing which is deficient or absent in the economy, by its bracing influence on the nervous and other tissues, it must diminish their susceptibility to disease on the approach of an exciting cause. In the role of a prophylactic it therefore plays a prominent part. Regarding its action upon the nerve-tissues, Hughlings Jackson has suggested that the

therapeutic virtues of arsenic in some of the neuroses may depend on its replacing phosphorus or some other isomorphous constituent of nerve-tissue which is rendered deficient in diseased conditions.

As indicative of the action of arsenic in improving the nutritive processes, Vogt instances its effects when administered to horses, a custom common among grooms in Vienna and other parts of Europe. Used upon these animals, it is said to improve their activity and powers of endurance, and give them a more glossy and healthy appearance. The observations of Van Tschudi, confirmed by Maclagan, upon the custom of arsenic-eating prevalent among the Styrian and Steyermark peasantry tend still further to bear out the conclusion that arsenic has remarkable power. These toxy-cophagi are in the habit of consuming every day what are considered poisonous doses of the mineral without bad effect. Indeed they claim that under its influence they are rendered longer-lived, that their appetite and color are improved, their endurance of fatigue and reaction against cold and other causes of disease increased, their muscular power augmented, their respiratory capacity enlarged, and their whole system placed in better condition.

In addition to these general effects arsenic is said to be a capillary stimulant, causing the contraction of vessels supplying various parts, so that hyperæmia is diminished and serous and sanguineous discharges arrested. In a series of papers read before the French Academy, in 1871, by Papillon, Mousnier, and Gubler, arsenic is treated as an agent endowed with many powers. Among others, besides those already noticed, it is claimed to be a reconstituent of the tissues, an arrester of disintegration, causing an accumulation of fat, calming febrile erethism and respiratory movements, and staying organic combustions. Under its agency abnormal temperature is diminished, waste of tissue lessened, and the amount of urea and urates in the urine notably affected.

After this sketch of the supposed general and local action of arsenic we may direct attention to some of its therapeutic uses.

The "tasteless ague-drop" of Fowler, first used in 1786, in the treatment of malarial affections, when the use of bark was not general in the same, is still considered by many the peer and by not a few as the superior of quinia. In the field of action as a prophylactic and antiperiodic it continues in some measure to hold its own. Against the paroxysmal type of disorders, with malaria as a cause, it is a potent weapon. It is true that the salts of bark more rapidly arrest the febrile paroxysms, and are more reliable when we have reason to expect their recurrence in the pernicious form. But it is well known that intermittents often return after quinia has been temporarily dispensed with, and sometimes even during its administration. The system seems to acquire a tolerance for the drug which after a time loses its remedial action. Indeed many affirm that while quinia may temporarily effect a delay of the febrile paroxysm, it tends to increase the susceptibility to the action of the morbid cause.

Arsenic is undoubtedly an antimalarial agent and a specific for diseases of the periodic type. Its remedial action may be slow, but it is none the less sure. Relapses after its use, together with abdominal engorgements and other sequelæ of intermittent fever, are said by many to be much less common than after quinia. Permanency of effect is its marked attribute. The contra-stimulation incident to a long use of quinine impairs the tone of the nervous system, and begets a condition of system favorable to the action of the exciting cause of the disease for which it was originally administered. On the other hand, arsenic cautiously used is a nerve-tonic, devoid of harm, and leaves no permanent bad effects. Its absence of taste and cheapness render it more desirable under many conditions and circumstances than quinia. Boudin, a French observer in Algeria, made trial of arsenic in four

thousand cases of malarial fever in its various forms. His report based thereon is that as a prophylactic and curative measure it is equally as efficacious as the salts of bark, and often more reliable as far as relapses and sequelæ are concerned. He states that he has cured cases which had resisted quinine. McLean, an English physician in the East Indies, states that in brow-ague, hemicrania, and neuralgias of malarial origin it is much to be preferred to quinine. Erasmus Wilson is of the opinion that arsenic administered in proper cases with caution surpasses any other known remedy in the management of malarial fevers.

To arsenic as an alterative, tonic, and curative agent in cutaneous diseases it is unnecessary to give more than passing notice. Its sphere of action here is well known. It is the remedy in all chronic skin-affections that are neither contagious, specific, nor cancerous. It is indicated in six out of seven cases, and all these are curable with it and incurable without it. Though beneficial in all such affections of the tegumentary system, it is particularly so in the scaly varieties, such as lepra, psoriasis, and pityriasis. In these latter cases, when not syphilitic, it is a true specific, and in others in which its good effects are often so apparent it is by nature of its primary tonic action whereby it corrects faulty assimilation upon which they depend, and by its secondary or stimulant influence which it exercises directly upon the skin.

It is a mistake to use arsenic in all diseases of the skin and under all circumstances. This error has occasioned much harm, and to it is to be attributed many of the failures and disappointments which are encountered. Administered at random, and without requisite preparatory treatment, many skin-affections are either rendered worse or not at all benefited. In the inflammatory stages of eczema, psoriasis, etc., the disorders are often aggravated by arsenic. Preliminary purgation, avoidance of irritating applications, cleanliness, attention to hygiene, etc., are prerequisites to success in an

arsenical course; and this applies to the use of arsenic not only in skin-diseases, but elsewhere. Used indiscriminately and without caution, in many diseases of the skin it is capable of injury, but properly applied in others it is admirable, and in one—viz., lepra—it is the only remedy known.

Frequently psoriasis, eczema, and other affections under the use of arsenic will seemingly be rendered worse. The redness, discharge, and irritation become aggravated for a time. These phenomena are often noticed, but are remarkable as being very often the forerunners of recovery.

As a reliable agent in the management of certain nervous affections arsenic holds a prominent place. It seems to have a special tendency to the nervous centers. It is the remedy *par excellence* for chorea. Begbie, in particular, states that he has used it for thirty years, and has never failed with it in the disease. Testimony from other sources is nearly as strong. The pathology of chorea has not been satisfactorily determined. By common consent, however, it is considered a paretic state of the spinal cord of a functional nature. The idea of an organic lesion is precluded by recovery being the rule. It is a characteristic of nerve-tissue that when weakened from any cause, or its normal functions otherwise interfered with, it expresses its recognition of such disturbing agencies by altered or perverted action in the parts it supplies. Hence the reflex convulsions in children from eccentric irritation, the *subsultus tendinum* in typhoid conditions, and the great mobility of the muscular system in chorea. The involuntary movements in chorea have been styled insanity of the muscles, the prayers of the nerves for healthy blood. While all who are anæmic do not become the subjects of chorea, the converse is generally true that choreics are anæmic. For this reason ferruginous preparations are often indicated, particularly when the anæmia is marked. Arsenic with or without iron often exhibits the happiest effects. With iron as an adjuvant and arsenic as

the remedy in chief, there is hardly a case of chorea which can be called incurable.

There is a marked relationship existing between chorea and rheumatism. Trousseau insists emphatically upon the invariable connection between the two. It will generally be found that choreics give evidences of some cardiac lesion present or past, and have had at some former period an attack of acute rheumatism. What the connection may be is difficult to determine. Anæmia most profound often follows as a sequel of rheumatic fever. Stokes long ago taught that in no disease is the blood more impoverished. This condition may give rise to that nervous irritability found in chorea. It may be that an anterior rheumatic fever leaves the nerve-centers in a state of hyperæsthesia, or it is possible that whatever changes in the spinal cord are incident to the choreic state may be but other modes of expression of the rheumatic diathesis. On any hypothesis the favorable action of arsenic may be explained. As a nervine tonic, increasing the vital power of the nerve-centers, it may render them better able to resist excitement, or, on the other hand, it may eliminate the rheumatic element.

It is claimed by some that the course and severity of epilepsy is favorably affected by arsenic. It must be confessed, however, that while this in some instances may be true, it is not comparable to some others as a therapeutic resource. Cases of epilepsy that are not benefited by the bromides and sulphate of atropia will hardly yield to arsenic.

In this connection it is well enough to remark that we are often compelled to premit the use of the bromides in epilepsy on account of the painful furuncular eruptions which often follow it. Echeverria asserts in his noble treatise on epilepsy that during their administration, if we combine with them small doses of arsenic, we will be enabled to prevent the occurrence of the eruption. We thus become able to continue the use of those agents whose action is most mani-

fest for good in epilepsy, and whose withdrawal on account of their disagreeable effects is often followed by a re-appearance of the convulsions.

In many neuralgias, and particularly those dependent upon malarial causes, Anstie and others claim that arsenic is a remedy whose action is magically certain and rapid. We are sure that this will be borne out by general experience. In many of those vague disorders—such as neuralgic headaches, lumbago, intercostal pain, and tenderness incident to the hysterical temperament in men and women—dependent upon impairment of centric tonicity and eccentric irritability of fiber, and due to an impoverished general condition, arsenic will rarely disappoint us. Trousseau directs attention to its remedial action in what he calls neuralgia with the herpetic diathesis. It is in those cases where the paroxysms of pain seem to precede, follow, or accompany an eruption of herpes.

In cardiac neuralgia, or angina pectoris, which is considered by Anstie as a true neuralgia and attributable to the same causes, that author is particularly partial to the use of arsenic. He considers it not only curative here, but as a marked prophylactic. In neuralgia of the viscera generally, which Anstie denominates visceralgia, he, together with Harles, Alexander, Albert, and Trousseau, favors arsenical medication.

Meryon lauds arsenic as an arrester of the onward march of progressive muscular atrophy and locomotor ataxia, and Trousseau claims that it produces excitation and increased power in the lower extremities. Reasoning thus, the latter observer suggests it in the treatment of paraplegia and loss of power over the rectum and bladder.

Hooping-cough and asthma, though usually treated of as diseases of the respiratory organs, really belong to the order *neuroses*. Though their ultimate effects may be exerted upon the structures of the lungs and air-passages, spasm is their prominent and pervading element. In hooping-cough the

spasmodic action is confined to the glottis and upper air-passages; in asthma it expends its force on the circular, unstriped fibers of the bronchi. In both there is abnormal excitation or otherwise perverted function of the vagus nerve, dependent upon some impression upon it at its central origin or peripheral distribution. The two affections therefore relate to the nervous system, and any therapeutics to be available therein must be directed principally to it. Such is the usual course pursued.

Many claim that the remedial agency of arsenic in hooping-cough is marked, and express themselves as satisfied with its action therein, as with the more generally used and highly-lauded sulphate of zinc and belladonna.

The trial of the powers of arsenic in alleviating spasmodic asthma is becoming much more general, and testimony is accumulating as to its happy results. Trousseau and Pidoux recommended to asthmatics the inhalations of the fumes of arsenite of soda. Ringer, in his late work on therapeutics, confidently does the same. Handfield Jones speaks of its internal use in asthma in terms of the warmest praise. Trousseau advocates it strenuously; Niemeyer makes favorable mention of it. In many of the systematic treatises, and scattered through the various recent medical journals, we notice not a little attention directed to arsenic as a remedy for asthma. In the *American Journal* for January, 1874, Dr. Paul contributes an article on this point. Paul states that after a long trial of the agent he is prepared to say that arsenic is the remedy of all others both for the mitigation and prophylaxis of asthmatic paroxysms. He thinks that it increases lung-power and diminishes neurotic reflex excitement, and has found it to relieve the attacks when all else failed; improvement becoming evident after its use in three or four days, or at the farthest a week. Paul also makes the strong statement that when called to see a patient in the midst of an asthmatic paroxysm he is confident of relieving

it by the hypodermic injection of five drops of Fowler's solution; and that he can accomplish this more rapidly and effectually than by the use of chloroform, opium, and other antispasmodics, by whatever avenue they may be introduced.

In hay-asthma also arsenic applied locally and used internally acts happily as a prophylactic, palliative, and curative agent. Morell Mackenzie, among others, advises it strongly.

Arsenic for its influence upon certain uterine diseases is indeed most valuable. As a capillary stimulant, nerve-tonic, alterative, and decongestive agent in diseased conditions of the mucous membranes in general, its effects in controlling certain derangements of the uterine system may be most opportunely called into play. In uncomplicated menorrhagia, or that not dependent upon polypus, cancer, or organic lesion, in which the condition is not a sthenic one, but the hyperæmia is passive and the organ is large, soft, and flaccid, arsenic rises to the height of a specific. To Aveling, Hunt, and Handfield Jones, of England, and Burns, of Maryland, are we mostly indebted for its use in this connection. In dysmenorrhea and menorrhagia not dependent upon physical obstruction arsenic is highly lauded by Sir James Y. Simpson and many others.

It is difficult to explain the beneficial effects said to follow the use of arsenic in some diseases of the digestive tract. Many of them doubtless may be traced to disturbance of the nervous system. By either its alterative action on the vasomotor system or as a corrector of vascular irregularities it may prove beneficial here.

Dr. Sidney Ringer insists that arsenic promotes warmth in the epigastrium, creates a sense of hunger, and stimulates digestion. He recommends its use in irritative dyspepsia where the tongue is furred and its papillæ red and prominent. He directs a drop or two of Fowler's solution after each meal in the various disturbances of the stomach and bowels in which it is applicable. Ringer considers it infallible as a palliative and curative resort in the dry retching and vomiting

of drunkards, where the ejected matters are sour and bitter; also in cancer, gastric ulcer, in chronic vomiting after meals without pain, or what is called simple regurgitation, and in crapulous diarrhea dependent upon dyspepsia, where there is great intestinal irritability, as evidenced by the excessive peristole and the appearance of undigested food in the motions. He also suggests the use of arsenic in the vomiting and collapse of malignant cholera.

Thorowgood uses arsenic and infusion of columbo with benefit in certain cases of dyspepsia where there is gastric pain with red tongue and projecting papillæ.

Leared extols the use of this agent highly in gastralgia and dyspepsia dependent upon mental causes, and where they occur as accompaniments of malarial disorders.

Dr. Allbut, of Leeds, remarks that of all the remedies for gastralgia arsenic is *king*, particularly where it occurs in a nervous temperament in connection with the gouty or nervous diathesis, or as an accompaniment of chronic cutaneous affections.

Trousseau uses arsenic freely and with advantage in what he denominates catarrhal diarrhea.

Dr. Austin Flint refers to its favorable action in diabetes mellitus.

The Gamgee brothers, in an article contributed to Reynolds's System of Medicine, mention it most favorably in their management of chronic glanders.

But it is in some of the respiratory diseases that the use of arsenic is attracting a very large share of attention at this time. Cahen, a French observer, believes that it is beneficial in all forms of dyspnoea, from whatever cause it may arise. Merrill, of New York, wrote to the same effect. Both contend that the action of arsenic upon the blood-vessels and bronchi is remarkable; that circulation is facilitated by it; congestion, hypertrophy, and hemorrhage relieved; and that it brings about increased capacity of the bronchial tubes for

the inspiration of air, inducing thereby a greater supply of oxygen to the tissues and freer decarbonization. Trousseau and many of the older authorities have suggested arsenical inhalations in the treatment of chronic pulmonary affections. In Greenhow's late work on bronchitis arsenic is an ingredient of all his prescriptions for the chronic form of that disorder. It is a favorite remedy with Walshe in the same affection.

In pulmonary phthisis particularly do we find it contesting the palm with cod-liver oil as a curative and analeptic medicine. Bennett's favorite weapon must look to its laurels. Merrill insists that twenty-five years ago he preached arsenical medication as the main reliance of those predisposed to consumption, and as the foremost prophylactic against those acute developments of pulmonary disease which often lead into fatal phthisis in strumous subjects.

Isnard, of Marseilles, in a series of contributions to late medical literature, sets forth his conclusions upon the influence of arsenical medication in phthisis which may be summed up as follows: that in pulmonary tuberculosis it diminishes febrile disturbance, nocturnal sweats, and general excitement; the digestive functions are improved, together with the diarrhea or its opposite, constipation; the cough is relieved, the secretion of the bronchi and pyogenic cavities lessened, and mucus in sputa substituted for pus. The improvement is general, the local lesions undergoing marked change for the better, cavities becoming cicatrized. Arsenic retards the evolution of tubercles, arrests evolution of new ones and softening of the old, rendering them abortive and latent, and not allowing them to pass beyond crudity. It promotes healthy respiration and relieves dyspnœa, acts beneficially on the pulmonary tissue, nerves, and muscles of respiration. By its local and general action it is at once curative and preventive, influences at once the capillary and different tissues, affecting both lungs and the whole economy. It does not

attack tubercle specifically as a parasiticide, but it acts on the elements and tissues which remain actually and relatively healthy.

Moutard Martin, of Paris, in his report to the French Academy, states that he has used arsenic in the treatment of phthisis in all its stages since 1861. In many instances he has effected complete cures thereby. In the main he agrees with Isnard in his estimate of its power. It has a marked action in slowly progressive phthisis, more so than in the rapid variety. In the latter the benefit derived from arsenic is not so positive. In all cases he has found that under this drug the general condition is more favorably modified than the local lesions. An arsenical course must be long and persevering, and it is better in the early than the later stages of consumption. Nonat, of La Charité, and Hérard, write to the same effect.

Dr. Austin Flint states that he has used arsenic in pulmonary consumption with manifest advantage. In my own limited observation arsenic has seemed to exert the happiest influence in the disease; and if at all beneficial in well-pronounced phthisis, the thought suggested itself, why may it not be equally so as a prophylactic against the developments of that morbid habit of body which is its inevitable offshoot and natural heritage? We allude to the strumous diathesis in its protean manifestations.

Arsenical medication is applicable particularly to chronic affections. Indeed it is not indicated and generally does harm in acute diseases, or in the acute stages of those that are chronic, where there is much febrile excitement and irritability. Chronicity as an element in diseased action is what we combat successfully by an arsenical course. Time should therefore be considered. Trousseau's maxim is applicable particularly here, that a chronic disease requires chronic treatment, and those who expect good results from arsenic in a week or two will certainly be disappointed. It often happens

that just as we are about to abandon it after a patient trial its good effects become apparent. Even in those disorders in which its action is so manifest it will sometimes fail unless we adopt certain precautions. Preliminary regulation of the diet and general hygiene, together with purgation, are often essential as introductory measures.

To those who aver that a long course of arsenic often gives rise to dropsical effusions and general cachexia, it may be replied that the *abuse* of a remedy is not its *use*. It may be remarked that there are few agents in the *materia medica* whose cautious use can be persisted in longer and whose deleterious effects are less enduring than arsenic. To administer it on an empty stomach, in constantly-increasing doses, without regard to attendant conditions, and push its use in the face of its pathogenic effects, is irrational, and will surely be followed by untoward results. The rule is to commence with small doses and gradually increase, leaving it off from time to time as its effects may seem to indicate. Fowler's solution is the form in which we generally administer arsenic. The French, as a rule, prefer solid arsenious acid in pill. It might be advisable in certain instances to push the remedy in large doses and sustain its effects by prolonging its administration. This is the custom of Devergie and some others, who remark that it is better to impress the system rapidly in order to insure fully its remedial effects; but the majority incline to the view that the slow alterative action is what is desired. Hunt states that it is a fatal mistake to use it in doses large enough to fully and rapidly impress the system. Commencing with two or three drops of Fowler's solution after each meal, increasing to five drops and sometimes to ten, is the customary mode. We are much mistaken if many patients will bear for a very long period even five drops of the arsenical solution without being inconvenienced by it. Pretermission of it for a time often becomes necessary. Five drops of Fowler's solution represent one twenty-fourth of a

grain of solid arsenic. Taken three times a day, one eighth of a grain is consumed; a grain a week, or four grains a month; no very inconsiderable amount when we come to think of it.

There are not a few who insist that the hypodermic use of this agent is better than by the ordinary method, inasmuch as they claim that less of it is needed for a given effect, that it is more certain of absorption, that it produces no disturbance of the digestive organs, a smaller amount is required, and that treatment is shorter and more effectual.

LOUISVILLE.

Reviews.

Transactions of the Twenty-third Anniversary Meeting of the Illinois State Medical Society, held at Bloomington, May 20 and 21, 1873.

This is a handsome volume of somewhat more than two hundred and fifty pages, which are variously occupied with speeches, discussions, reports, etc. The speeches are first in order, and therefore a moment's reference to them. Bloomington, the place of this meeting whose proceedings are before us, must be rich in speech-makers; certainly this occasion was rich in speeches. First the citizens had a spokesman, Dr. Worrell, who delivered "a welcome address," concluding with Bryant's familiar lines about the "innumerable caravan," "quarry slave," etc., that have been used so often that really they have got too thin for any thing but the lightest rhetoric. To this Professor Anderson responded. Then came upon the stage Ira J. Bloomfield, Esq.—not a *dies iræ*, but doubtless a *hora iræ*, as would befit his position—who, in behalf of the "common council and municipal authorities of the city of Bloomington," welcomes the learned Illinois doctors again. Dr. Pierce, of Cook County, responds and praises Bloomington right handsomely, as if he and the other orators were members of a mutual admiration society. Then comes Mr. J. A. Jackman—we are sure we are writing the name correctly, *Jack-man*—who represents the board of education, and gives the great doctors another welcome. Mr. Jackman ambles along in respectable prose for a few sentences, and then breaks forth into some very stupid rhythmic jingle that is not worth

the two pages of paper upon which it is printed. Nevertheless, let us repeat, the author's name was simply Jackman. Dr. McArthur replies, and fights over the late war. Then comes another "welcome"—really these doctors were so very much welcomed we wonder they ever got away from Bloomington—this welcome being by the Hon. Hamilton Spencer in behalf of the bar of McLean County. We supposed the welcoming was done, subject and orators quite exhausted; but looking further on in the volume we find that the second day the State Normal School was visited, when President Edwards assailed the doctors with some more welcome rhetoric.

Still another speech we must refer to before coming to the real professional work of the Society. Dr. George T. Allen discourses upon *the progress of civilization*, appending to his lecture a note acknowledging that he has placed himself under "great obligations to Draper, the late Dr. Buckle," Adam Smith, and Mill. Prof. Draper will feel honored, and thus the great obligations to him will be canceled; and as for Buckle, Mill, and Smith, probably they will not take any notice of the address, or take any steps even in the court of Rhadamanthus to enforce the obligations. But really the lecture, which was doubtless interesting to its auditors, was almost as unsuitable for the occasion and for publication in the transactions of a medical society as a discourse upon the manufacture of Elgin watches, or the character of Saturn's rings, or the uses of any other sort of rings.

Dr. J. L. White, of Bloomington, made the *report on surgery*. Dr. White believes "*conservative surgery*" is to be avoided in railway injuries; speaks of the generally-recognized value by the profession of Illinois of drainage tubes to insure the free and entire discharge of pus wherever collected; advocates Manzoni's operation for stone—*urethrotomy*—an operation performed successfully thirty times by Dr. Wood, of Kansas City; five successful cases also by Dr. Hill, of Bloomington.

He reports a case of dislocation of the ilium—recovery; condemns the use of stimulants in shock from accident; believes carbolic acid the most indispensable—unless sulphuric ether—article to the surgeons, and chloroform an unsafe agent even in the most careful hands. This report elicited a very interesting discussion, having among its participants Drs. Andrews, Prince, and McArthur.

Dr. J. B. Hamilton made a report on the *treatment of fractures in Illinois*. After presenting various reports of fractures treated, Dr. H. remarks that “immovable dressings, whatever may be their merits or demerits, are evidently not much in use in Illinois; and the majority of the profession in the state do not adhere to the doctrine of waiting for the primary swelling to abate before applying a permanent dressing.” . . . “The variety of dressings which have been reported for the same fractures, and the almost uniform success attending their efforts, would seem to indicate that in skilled hands almost any kind of an apparatus that fulfills a majority of the indications to be met will meet with reasonable success.”

Dr. Holmes presented a report on *intraocular tumors*; Dr. Hotz, on *strychnia in amaurosis*, his conclusions being as follows: “1. Strychnia in small doses can produce a marked stimulation of the optic nerves; 2. Its hypodermic use is the best; 3. The dose may be gradually increased to one twelfth of a grain without injury to the system; 4. If the first injections do no good, it is not worth while to continue its use; 5. It is useful in functional and in traumatic amblyopia and in tobacco amaurosis; 6. No use in amblyopia with morbid changes in the choroid and retina, nor in far-advanced atrophy of the optic nerves; 7. In all cases of atrophy of the optic nerve strychnia is a valuable remedy, because by a few injections we can ascertain whether a useful amount of sight can be recovered, or whether the atrophic destruction of the nerve has advanced beyond aid.

Dr. Andrew McFarland is the author of a very able report

on *medical jurisprudence*. The two topics which this report chiefly discusses are *questions of professional practice* and *questions of mental state*. Dr. McFarland, in concluding, very sensibly remarks that "it is to be deplored that the science of the mind, as well as its diseases, seems of late to receive less than formerly the attention of medical men. They are too much regarded as a specialty and outside the main track of the profession. Those who neglect them do not seem aware of the aid they lend in the investigation of mere bodily disease. How little account is made of the patient's mental state when listening to his narrative of his individual sensations and acts! How often his false sensations—his absolute delusions even—go in without a question to shape the most important opinions! This field is too broad and fertile not to merit attention on some future occasion. But in the department of jurisprudence every physician owes it to himself to be informed on the subject so far as to be the respected instructor of juries, and not the helpless victim of the arts of another profession; and we dismiss the subject with the remark that many a reputation, secure under the not-to-be-measured merits of the sick-room, receives an almost incurable wound under what the public will regard the crucial test of the witness-stand."

Dr. J. H. Hollister presented the *report on drugs and medicines*. We shall present an extract, not because it has any obvious connection with drugs and medicines, but as a specimen of the sublime altitude to which a doctor may rise on rhetorical wings when we were expecting a dry discussion of powders, or at least nothing better than sugar-coated pills. "Time was when the stars seemed but glittering gem-points, spangles adorning the curtain of night; now they are resolved into as many worlds; and the music of these spheres in their perpetual rounds is one of the grand anthems of the ages."

A report on *galvano-therapeutics*, by Dr. David Prince, is the most elaborate paper in the volume. Dr. P. has been

a diligent and most successful worker in this department, as well as in others, and really the results of his observation are so valuable that we wish his entire report could have a much wider circulation.

Dr. Hawley reports on *the assistance necessary and justifiable in difficult and protracted labors*. The subject especially discussed in this brief report is the value of *external pressure*. Dr. H. believes such pressure "will be found applicable in a very considerable number of cases in which a moderate addition to the expulsive power of the mother is sufficient to determine the birth, which will not take place without some exterior aid." Dr. H. states that he believes "writers on obstetrics have not deemed such efforts to supplement the expulsive force of the mother as worthy of discussion," etc. He also speaks of "adding fifty pounds" to the maternal forces. If Dr. Hawley will turn to pp. 13 and 14 of Barnes's *Obstetric Operations*, he will find that the question has been fully presented; and he will find too that the accoucheur will not ordinarily be required to exercise any thing like the amount of force he suggests. So too in the *Lancet* (Oct. 1, 1870, London ed.) he will find external pressure advocated by Playfair. Finally, in the sixth volume of the *American Practitioner*, 1872, page 109, he will find an extract from a monograph on *Uterine Expression*, Paris, 1872, by Dr. Suchard, in which the practice which he urges in 1873 as a novelty is fully set forth.

Dr. Worrell has a paper on *the chief causes of phthisis in New England*; Dr. N. S. Davis on *chronic cerebro-spinal meningitis*; Dr. Earle on *the physiology of the nervous system*; Dr. G. Wheeler Jones on *cerebro-spinal meningitis*; and Dr. Samuel J. Jones on *otology*. We would like to refer to some points in the brief but of course excellent paper of Dr. Davis, as well as some in the longer but still very interesting one of Dr. G. W. Jones, but time will not permit any further notice of this volume.

Clinical Notes on the Electric Cautery in Uterine Surgery. By J. BYRNE, M. D., M. R. C. S. E., etc. New York: Wm. Wood & Co.

This is mainly a revision of a paper by Dr. Byrne in the New York Medical Record, and issued in compliance with the wishes of many prominent members in the profession.

Dr. Byrne's little volume is excellent, and will be useful not only in directing the attention of the profession to the value of the electro-cautery in uterine surgery, but also in teaching them how it is to be used. In the last number of this journal there were given some practical rules laid down by Dr. B. in his book; rules which are of especial value as coming from one who probably has had a larger experience than any one else in this department and in this mode of surgical operations.

T. P.

A Practical Treatise on the Diseases of Children. By J. FORSYTH MEIGS, M. D., and WILLIAM PEPPER, M. D. Fifth edition, revised and enlarged. Philadelphia: Lindsay & Blakiston. 1874.

The merits of this work are too well known to need a word from us. A fifth edition in 1874, only a few years after the first was issued, is sufficient evidence of the verdict of the American profession. "Meigs and Pepper," we fully believe, stands at the head of all works in the English language on diseases of children. We can not enter into any analysis of the work, nor is it necessary. We only add that in this edition several new articles appear, and several of the old ones have been re-written, so that the work is fully up with the pathology and therapeutics of the present day.

T. P.

Clinic of the Month.

TREATMENT OF GRANULAR OPTHALMIA.—Mr. Swanzy, Ophthalmic Surgeon to the Adelaide Hospital, Dublin, says (*Irish Hospital Gazette*) in a recent lecture on this subject:

“The first and most important thing is to provide abundance of fresh air, both within doors and without, for your patients. You should never permit them to remain moping in the house, as they are apt to do, but strictly prescribe several hours’ open-air exercise daily for them. I am convinced that more may be effected in many conjunctival diseases by fresh air alone than by any other treatment without it. It acts, I think, directly and locally on the conjunctiva, and not in any round-about way through the constitution. I have already mentioned that you should excite vascular reaction when it is insufficient for the absorption of the granulations, and restrain it when excessive. The means for exciting vascular reaction in the conjunctiva are various. Hippocrates practiced four eye-operations, one of them being the ‘rubbing-off of granulations.’ He did not really rub them off, but excited vascularization mechanically. I have heard that the same proceeding is now again practiced at Athens by Dr. Anagnostakis, the implement employed being a bit of rough cloth. Warm fomentations will also excite hyperæmia. However, the most usual method is by aid of chemical substances of one kind or another applied directly on the mucous membrane; and a constant bone of contention it is which application is the most effective for a cure. There are some who use solid sulphate of copper to the exclusion of every thing else, while others banish it quite from their practice. I know

some who use nothing but a weak solution of acetate of lead, and again others who discard every thing but a solution of nitrate of silver. Very often the result depends upon the manner in which the substances are applied as much as in the kind of substance. As a rule, when I want to excite hyperæmia I use the solid sulphate of copper; when I wish to check excessive blennorrhœa I apply a ten-grain solution of nitrate of silver to the conjunctiva with a camel's-hair pencil, and neutralize it then with a solution of common salt, washing this off with plain water. The effect of the application can be modified by the length of time (a few moments more or less) which elapses between the nitrate of silver and the salt-water. When the blennorrhœa seems to be only slightly in excess, the liq. plumb. subacet. dil. of the pharmacopœia (without spirit) is an admirable thing. It also should be washed off with plain water, and its use in this way is not contra-indicated by the presence of ulcers on the cornea. It is most important in using any local application that the upper lid be well everted, in order that you may reach that part of the membrane where it is reflected from the lid on to the globe; for a neglect of this part might render your treatment abortive.

"After you have been treating a case for a lengthened time regularly you should not suddenly stop when you have reached a certain point, but you should leave off gradually, with increasing periods between each application; otherwise you are very apt to have a recurrence. I never prescribe tonics or other internal remedies in the treatment of granular ophthalmia, unless when they are indicated by other symptoms than those simply of the eye-disease.

"You observe that the object of using caustics in this disease is not for the purpose of destroying the granulations by their direct action. They are not, in fact, used as caustics, but either as excitants of vascular reaction or as astringents. Your object is to restore the conjunctiva to its normal con-

dition; but if you cauterize it you must produce cicatrization, the very thing you wish to avoid. For the same reason you should not snip off the protruding granulations, nor should you scarify the conjunctiva.

"When you get a fresh case of acute granular ophthalmia (military or Egyptian ophthalmia) you should not at first use any topical application. Use iced compresses to the lids externally, leeching at the external canthus, and purging. If the attack does not go back of itself, the membrane will bear local measures later on much better than at first.

"If certain complications are present, you will find it difficult to make way with the treatment until you have removed them. A very common one, and one liable to be overlooked, is an obstruction in the nasal duct. If the tears do not flow off readily, they lodge in the conjunctival sac and keep up a constant irritation, which is unfavorable for the cure. There are some persons whose lids are much more tightly applied to the globe than others, and in them granular ophthalmia is apt to be very obstinate. You must in such cases endeavor, by means of the operation for blepharophimosis, to relieve this tension of the lids. When pannus has existed for a lengthened time it often induces a chronic serous iritis, recognizable by the increased depth of the anterior chamber and by the inaction of the pupil when atropine has been dropped in. For many reasons this is always a dangerous condition of the eye, and you may be sure that unless you treat it you will not remove the pannus. Atropine, puncture of the anterior chamber, or an iridectomy are to be employed."

ON THE ANTIPYRETIC ACTION OF QUININE.—In a very clever paper on this subject in the *Practitioner* by Dr. Clifford Allbutt he says:

"I found quinine to be a very powerful antipyretic in septic fevers. In that kind of remittent pyrexia which is seen in pyæmia, in septic absorption, in erysipelatous peritonitis, and

the like, I have generally found that quinine in daily quantities of twenty to sixty grains will greatly reduce the oscillations. I have very often found indeed that by its means the rises may be wholly prevented, and the patient made apparently fever-free. Again, in the prolonged hectic of pulmonary disease and like affections, I have found it easy to moderate the daily movements, and perhaps to prevent them; but in such long-continuing cases it is not desirable to add chronic cinchonism to the other symptoms, and five or ten grains is generally the limit of the daily quantity. Little indeed could be gained by wholly reducing the fever. To reduce it in great part suffices to prevent rapid wasting, to prevent chills and sweats, and to restore appetite; but the local disease itself is not removed. Indirectly, of course, we relieve it, insomuch as the fever and the primary disease act and react upon each other, and the primary failure has more chance of repair if the fever be moderated. But to moderate it seems better than to repress it with a heavy hand, and I have many charts, extending over weeks of time, in my possession which show the effect of quinine in bringing the daily oscillations within much narrower parallels, and in thus giving the patient more chance of recovery. Many a case of dangerous pneumonia of the apex and the like has thus ended favorably which looked bad enough until the above means were adopted. Quinine also in doses appropriate to the occasion—and this the thermometer alone can decide—is to be given whenever septic incidents are seen in the course of specific fevers or following them; and if the absorption be slight or temporary, the immediate and repeated use of quinine is invaluable.

“Turning now from this free estimate of the value of quinine in septic and hectic states to its effects in specific febrile periods, I speak with less confidence. Sometimes it fails even in very heavy doses to depress the curve at all; sometimes it depresses the curve for a time, but the depression is followed by a bound

upward which the same means can not control. Such results we generally see in the ascending section of the curve. I have not had much reason to congratulate myself on the use of heavy doses of quinine in depressing the elevation of the first four days of typhus or pneumonia, or in the hyperpyrexia of rheumatic fever. Often I have thought my interference to have been positively harmful, but of this it is difficult to be sure. Therefore when we have to meet immediate danger from a rapid rise I put no trust in quinine, but resort at once to cold baths, bags of ice, and the like. If, however, a high temperature is doing harm at the latter part of a period, quinine will often act like a charm. If, for example, toward the end of the third week of typhoid, a temperature of 104.5° or 105° is likely to be too much for the frame already too far consumed to resist it as it would once have done, then twenty grains of quinine is often very valuable; and such doses, repeated as may be required, may determine the close of the period and release the sufferer. In the second week we get no such success as this. Again, after or during defervescence, we often meet with impulsive elevations of the curve, apparently not due to any septic absorption, but which betray the enfeebled tension of the regulating power of the body. Against these quinine is most useful, and often cuts them short at once. Their return may also be prevented by the prescription of five grains of quinine every morning for a few days.

“It is not easy to frame any general explanation of these facts, but I will attempt it in a provisional way. First of all, quinine is perfectly harmless, and is well borne in fever. I have often given as much as three and four drachms in twenty-four hours, and often in cases where it certainly has exercised its antipyretic powers it has not produced even cinchonism.

“Secondly, its action is more and more useful as the febrile movement approaches the remittent and intermittent forms. In ‘blood-poisoning,’ when the temperatures vary

between 101° , say, and 103.5° , it is useful; and if the oscillations be between 99° and 104° , it is invaluable so far as the fever is concerned. But the victory has too often seemed to me to be a barren one. If the 'blood-poisoning' be comparatively small, the disease may be or seem to be cut short or reduced; but if the poisoning be more intense, and its sources can not be controlled—as in puerperal cases, for instance—I have been sadly disappointed to find, although the temperatures may have been kept down even to the normal, that death or great local mischief has scarcely been warded off. I lately saw a case with Mr. Carter, of Leeds, in which a lady died after some three weeks of septic fever following small-pox, although we were easily able to keep the daily curves within or almost within the parallels of health. Her life was probably prolonged, but not saved. She became weaker, nervous tremors set in as usual, the breathing became more rapid, and she died of exhaustion in spite of unlimited food and alcohol. I saw a case very like it about a year ago with Mr. W. Hall, of Leeds. We kept the temperature down as we pleased, but we could not flatter ourselves that the patient's state was materially lightened thereby. After a long fight her life was spared, but an enormous abscess or abscesses formed in the right shoulder and arm. This was a puerperal case. So that I can not regard quinine as an indirect antipyretic by virtue of any power as a direct antiseptic, as I was once tempted to suppose. On the contrary, it checks the fever, while a fatal issue nevertheless seems to prove that the septic mischief may and often does continue unmoderated. It is almost unnecessary to state how far my experience is borne out by the well-known effects of quinine in intermittent fever properly so called. Once more: is quinine useful in moderating the average intensity of continued fevers having a definite course, such as typhus or typhoid? To use my former figure of speech, can we by quinine flatten the trajectory of such a disturbance; and if so, what do we

gain by it? We might fairly hope to limit the injurious consequences of a prolonged pyrexia, such, for example, as the combustion of the heart. My own experience of the continued use of large doses of quinine in typhoid is full of contradictions. On the whole I have not a very cheerful view of our capabilities in this respect; and as a matter of practice I have found myself neglecting to use quinine at all during the stages of ascent and of culmination, and reserving the drug for the time of flickering, when the remittent oscillations of impending lysis enable me to act with certainty if required."

MERCURY IN SYPHILIS.—The following are Mr. Jonathan Hutchinson's *conclusions*, as given in the London Lancet:

That mercury is probably a true vital antidote against the syphilitic virus, and that it is capable of bringing about a real cure.

That in practice a good many cases are really cured by mercury; the cure being proved by the restoration to good health, and in some cases by renewed susceptibility to contagion.

That the probability of cure depends upon the stage of development attained by the disease when the remedy is resorted to, and upon the perseverance with which it is used.

That in order to secure the antidotal efficacy of mercury against syphilis, it is desirable to introduce a considerable quantity into the system and to protract its use over a very long time.

That ptyalism and other evidences of the physiological action, so far from being beneficial, are, if possible, to be carefully avoided, since they prevent the sufficiently prolonged use of the remedy.

That in cases in which the patient shows an idiosyncrasy peculiarly susceptible to mercury, the indication is to reduce the dose rather than to omit the drug.

That it is impossible to begin the administration of mercury too soon, and that it should be resorted to without loss of time in all cases in which a chancre shows a tendency to indurate.

That many cases of indurated chancre treated early by mercury never show any of the characteristic symptoms of the secondary stage.

That in other cases of mercurial cure of the chancres in which yet secondary symptoms do occur, they are usually milder than if allowed to develop without specific treatment.

That when mercury does not wholly abrogate the secondary stage it exhibits a remarkable power in delaying it.

That delayed outbreaks of secondary syphilis are to be regarded rather as a proof that the administration has not been sufficiently persevering than that the remedy was not efficient.

That it is probable that the risk of tertiary symptoms is in ratio with the severity and prolonged duration of the secondary stage.

That there are some grounds for believing that the tertiary symptoms of syphilis are both less frequent and less severe in those who have been efficiently treated by mercury than in others.

That mercury cautiously given does not in a great majority of instances do any injury to the general health, and that its local inconveniences may usually be prevented.

That the doctrine of the real antidotal character of mercury in respect to syphilis ought to lead to much more prolonged administration of it, with the hope of destroying utterly all lingering germs of the malady.

That most collected statistics as to the duration of treatment and freedom from relapse are misleading and worse than useless, because usually the treatment was far too short to be effectual.

That it has not yet been proved that there are any special

forms of syphilitic diseases in which mercury ought to be avoided, although, as a general rule, it is acknowledged that it must be used with more caution in all forms which are attended by ulceration than in others.

That iodide of potassium possesses little or no efficacy against either the primary or secondary forms of syphilis.

That the efficacy of mercury is often most signally proved in cases which have utterly resisted the action of iodide of potassium.

That it does not matter whether mercury is given by the mouth, by inunction, or by the vapor-bath, provided that whichever method be selected care be taken to avoid salivation, purging, etc.

That the doses usually resorted to for internal administration are for the most part too large, and thus often necessitate a premature discontinuance of the remedy.

That if one method of administration does not proceed satisfactorily, another should be tried, and that in no case of difficulty should the vapor-bath be forgotten.

TETANUS NEONATORUM.—In the *Fahrbuch für Kinderheilkunde* (Dec., 1873) is an article on the treatment of tetanus neonatorum with chloral hydrate by Dr. A. v. Huttenbrenner, of Vienna. Three of these cases were treated by chloral hydrate in the clinic of Prof. Widerhofer, and two recovered. The medicine was administered in the following way: one or two grains, alone or mixed with a little milk and sugar, were administered, dissolved in breast-milk, through the nose, as the mouth was firmly closed. The administration was generally followed immediately by a paroxysm, which ceased when the action of the chloral began. When the child fell asleep it was carefully watched, so as to repeat the dose on the approach of the next paroxysm. When the effect of a one-grain dose did not last sufficiently long it was increased to two, sometimes to three grains, so as to obtain an action

lasting several hours, as a good result is only obtained where the child is held in continuous narcosis. The child's nourishment must not be neglected, but the breast-milk must be given through the nose. Where such patients suffer with colic or meteorismus warm poultices are applied to the abdomen and enemata are administered; internally, paullinia and tinctura krameriae are given. Injurious effects from chloral hydrate are never observed when certain precautions are used. When there is an odor of chloroform in the breath this is a sign of deep narcotism, and the medicine should be left off for a while, as sometimes chloral hydrate has an accumulative action. The three cases are reported in full, with records of the autopsy of the fatal case. The author draws the following conclusions: 1. Tetanus is not an absolutely fatal disease. 2. The same can run through its course with or without fever. Those cases running a rapid course, with high fever, are cases where the tetanic symptoms are merely those of a general poisoning of the blood, while those cases without fever are to be regarded as of reflex origin, due to some peripheral irritation. 3. The cases without fever have a more favorable prognosis, although where the fever is high the prognosis is not absolutely a fatal one, as is shown by Dr. Kirchstetter's case, reported in the *Jahrbuch* (vii *Jahrgang*). 4. Chloral hydrate is by no means a specific, but is a remedy preferable to all others: (a) Because it is a pure hypnotic; (b) Because it has no unpleasant after-effects, as morphia has, causing hyperæmia of the brain; (c) Because it is easily administered, and an accumulative action is very rare.

It has the advantage over chloroform of being more easily held under control. The child is put into a quiet sleep, and the consequences of long-continued muscular contractions, particularly of the diaphragm, are made less injurious. As tetanus lasts from fourteen days to three weeks, it is only necessary to enable the child to hold out this length of time or recovery to take place. (Boston Med. and Surg. Jour.)

NEW PROCESS FOR TAR-WATER.—L. Pommier prepares a concentrated tar-water by macerating in a covered vessel for eight days a mixture consisting of ten parts each of Norwegian tar and ammonia-water and of one hundred parts of water. The mixture is then boiled to expel the excess of ammonia, then cooled and filtered. Thus prepared it has a mild alkaline reaction to litmus, and may be diluted as required. (*American Journal of Pharmacy.*)

CROTON-CHLORAL HYDRAT.—Dr. Baker writes in the *British Medical Journal*:

"The profession and the public are chiefly indebted to Dr. Oscar Liebreich for the introduction of chloral hydrate; and this obligation is further increased by the addition of croton-chloral hydrat, which will doubtless prove an equally valuable therapeutic agent. It is of the greatest service in cases of nerve-pain. Every sufferer from neuralgia is anxious to obtain speedy relief from pain. This may be obtained by taking croton-chloral hydrat, and then the antecedent causes of the neuralgia may afterward be inquired into and treated accordingly. The following cases are interesting, as showing the immediate relief from pain that this drug affords.

"A suffered from facial neuralgia of a most severe character. It affected her hearing and eyesight; she could not rest or take food. She took one grain of croton-chloral hydrat every hour. In three hours she was considerably better. After taking three more doses she was entirely free from pain.

"B suffered much from facial neuralgia dependent on decayed teeth, and had not been able to take food or sleep for three days. She was ordered croton-chloral hydrat in grain-doses every hour, and obtained great relief after two doses. Six doses removed the pain completely. She slept that night.

"C. This patient suffered from concussion of the spine

caused by a railway accident some years ago. She has had every variety of treatment for the pain she suffers in the spine and the nerves proceeding therefrom. She took twenty grains of potassium bromide and one grain of croton-chloral hydrat three times a day, with marked relief and no bad symptoms.

"E is a young dyspeptic and neuralgic patient, and suffers greatly from dysmenorrhœa. She took two grain-doses when the paroxysms of pain came on with marked relief.

"F has been under treatment for various neuralgiæ for some years. She has had at one time or another almost every external and internal therapeutic agent in the pharmacopœia; strychnia, iron, quinia, ammonium chloride, aconite, belladonna, iodine, bromine, blisters, hypodermic injections, galvanism, together with baths and other hygienic appliances, including change of air. In this case two grain-doses of croton-chloral hydrat every hour afforded more speedy relief from pain than any of the above remedies. After taking eight grains she was almost free from pain.

"In thirteen patients who have taken croton-chloral hydrat not a single bad symptom has been observed. In grain-doses it relieves pain quickly, causes natural sleep, no subsequent headache or furred tongue. In several cases it acted as a gentle laxative."

Notes and Queries.

Editors American Practitioner :

I beg the favor of a few words in explanation as to the subject of a review of my humble article upon "expert testimony" as appearing in the February number of your journal. The writer of the review is evidently a pure-minded gentleman, who does not stake his reputation as a critic upon hypercriticism, but wrote in a spirit of honesty. Such reviews are commendable, and can not fail to do good. In speaking of the Miss Steinecke poisoning case, the reviewer thinks us in error in supposing that the "incompetent testimony" was alone chemical. Upon an examination of our article he will find that we were not discussing *all* the points in that case, but only bringing up certain ones to illustrate our position, which was that in any given case, with the *best* chemical examination, there might be other testimony so absurd or erroneous as to negative any chemical evidence, and not simply to assert there was no fault in the chemical evidence of the case cited. We still think that our position, as explained, was correct.

As to the very candid remarks of the reviewer about the tabulated steps of Profs. Reese's and McCulloch's analyses, as quoted in our article, we simply say that we waive the point as to whether it was *hot* or *cold* hydrochloric acid used by the latter in dissolving his precipitate, although from our understanding of the report we can come to no other conclusion than that it was *cold*; for, as the reviewer himself quotes the testimony: "I do n't know that it was *hot* or *cold*; it was *strong* acid;" but we give the point and then the

similarity would be complete. But what about the *vital* difference found in the action of tartaric acid on *one* precipitate and hydrochloric on the *other* but similar one in the second analysis? If tartaric acid *did* dissolve it, then this step looked toward antimony; if it *did not* dissolve the second precipitate, but hydrochloric acid had to be resorted to, then this was proof positive that the second was not antimony. This is the important and crucial test in the process, and the reviewer has not attempted to reconcile the two processes or explain the subject in any way. Indeed they are not susceptible of reconciliation. The processes were *not* in any degree similar, and therefore can not be justly compared. Now this was the only step in the analysis we dwelt upon. The additional ones noticed by the reviewer are well worthy of consideration in any given case, but they do not bear upon the point discussed in the least.

As to the *gist* of the whole of Prof. Reese's remarks being the impropriety of relying *exclusively* upon the sulphureted-hydrogen test for antimony, we differ in our views from the writer. Dr. Reese expressly attempts to prove the fallacy of this one step in Prof. Aikin's analysis, and it is to this we directed our attention. In this he certainly failed. That this should be *all* that is done in any suspected case we certainly do not believe, and expressly stated in our article that "this is not the same as saying that antimony was present in the specimen he analyzed; but it is saying that, taking his statement as true and other things being equal, we know of nothing that would give the results in their entirety *but* antimony;" and so we still assert. The case may have been rightly decided, but the attempt of Dr. Reese to institute a just comparison between the steps of the two analyses failed.

INDIANAPOLIS, IND., March, 1874.

THAD. M. STEVENS, M. D.

[In connection with the above, and in the absence of the writer of the review, we beg to offer one or two remarks.

If Dr. Stevens only meant to "illustrate" his "position, which was that in any given case, with the *best* chemical examination, there might be other testimony so absurd or erroneous as to negative any chemical evidence," he was most unfortunate in his selection of the *Schæppe case* for his illustration; inasmuch as it is universally conceded that the "chemical examination" in this case was not only *not* "the best," but, on the contrary, was materially defective, as was pointed out in the review in our February number.

Secondly, in relation to Dr. Stevens's interrogatories about "the *vital* difference found in the action of tartaric acid" on the two precipitates (the one alleged to be antimonial and the other composed of complex organic substances exclusively), we find on turning to his tabulated paper that he says "the only point of resemblance to the proper action of antimony under the same circumstances was the cloud produced when the first precipitate dissolved in hydrochloric acid was cast into water;" whereas, in point of fact, the only *distinction* between the two cases (as stated in the review) "is the single circumstance that the white cloud is soluble in tartaric acid if antimony is present." So far from there being but one single "point of resemblance," there really is but *one single point of divergence* out of the whole number of reactions following the employment of the sulphureted-hydrogen test. If we remember the report of the Wharton trial correctly, the points of resemblance pointed out by Prof. Reese and others were: (1) the reddish precipitate by sulphureted hydrogen, (2) the solution of this precipitate in *boiling* hydrochloric acid, (3) the production of a white cloud or precipitate on throwing the last-mentioned solution into water, and (4) the imparting to this last precipitate a reddish-yellow color on touching it with sulphide of ammonium. The *only* point of divergence was a difference in the action of tartaric acid, as before mentioned. Now, with the above facts before us, we think that Dr. Stevens is hardly warranted in asserting that "the

processes were not in any degree similar, and therefore can not be justly compared." Neither do we think him quite fair in saying "this is the *only* step in the analysis we dwelt upon," when he had taken the trouble, as he informs us in his first paper, to "tabulate" the results of both experiments, and had arrived at the *wrong* inference that there was one "only point of resemblance" between the two.

We are not much given to chemical researches, but on a careful reference to the published trial we feel fully warranted in arriving at the above conclusions; and if the discussion of the subject in our pages shall have the effect of producing a greater amount of care and caution in those to whom the responsible duty of medico-legal examinations is intrusted, our purpose will be fully answered.]

NOTHING NEW UNDER THE SUN.—It is with no desire to detach a single leaf from the well-earned laurels of the Kiel professor for whom the honor of instituting "bloodless surgery" is claimed—especially since the publication of the noble sentiments expressed in his letter to Mr. McCormac—that these lines are penned. So far from disputing his right to priority, we would fully join in the expressions of McCormac: "No prior method even achieved the result; and such result, obtained as it has been in Esmarch's case, establishes his claim to priority of the best sort—a practical success." But as many of the records of early attempts at instituting similar procedures have been revived, it may not be out of place to call attention to the following paragraph extracted from the *Western Journal of Medicine and Surgery*, edited by Dr. L. P. Yandell, of July, 1845:

"BLOODLESS AMPUTATIONS.—Our friend, Dr. Mosby, proposes to save the subjects of amputation from loss of blood, occasionally a very disastrous circumstance in exhausted individuals, by the following method, which he lately communicated to us and requested us to submit to the profession. First, he would apply a roller-

bandage to the limb, so as to force the blood as much as possible out of it, and then by my means of a tourniquet cut off the ingress of blood by the arteries, slackening the instrument after the amputation sufficiently to find the vessels that might bleed. . . . Y."

It matters little whether Dr. Mosby preceded or followed Clover, Stromeyer, Langenbeck, and others, the "groove" in which the surgical mind has run is sufficiently demonstrated, and a portion of the credit is claimed for Kentucky surgery. E. M'C.

TASTELESS TINCTURE OF THE CHLORIDE OF IRON.—We are indebted to Dr. Vincent Davis, pharmacist, of this city, for the following formula for the preparation of the tinct. ferri chlorid. (new):

| | |
|-----------------------------------|--------|
| R. Citric acid, | ℥ j; |
| Carbonate potassium, | q. s.; |
| Distilled water, | ℥ j; |
| Sol. chloride of iron (offic.), . | ℥ j; |
| Dilute alcohol, | q. s.; |
| White sugar, | ℥ ss. |

Dissolve the citric acid in the water, apply heat sufficient to bring to the boiling-point, then remove from fire and add carbonate potassium until it ceases to effervesce. You now have a beautiful green solution, to which add dilute alcohol sufficient to make four fluid ounces; in this dissolve the sugar, and filter.

A VEGETABLE CURE FOR SYPHILIS.—*Editors Amer. Pract.:* Having lived my first century pretty well out, and thinking that I may some time or other die, I desire through your journal to make known to the medical public a discovery I made, many years ago, of a vegetable cure for syphilis. This is a tincture of datura stramonium and phytolacca decandra. Of the best proportions of the ingredients I am not now able to speak with confidence, but my recollection is that I made

the tincture of one ounce of the stramonium-seed and half a pound of the poke-root to two quarts of common whisky. I am sure I have in the last fifty years treated by this tincture twenty cases of syphilis, many of them of the worst form, with perfect success. It is proper to add that I got the hint of poke-root as a remedy in the disease as long ago as 1815, when I was a pupil in Dr. B. W. Dudley's office, at Lexington, where I saw it given successfully in the case of a negro man.

C. C. GRAHAM, M. D.

THE UNIVERSITY OF LOUISVILLE—COMMENCEMENT EXERCISES OF THE MEDICAL DEPARTMENT.—The Commencement exercises of the thirty-seventh annual session of this institution came off at Library Hall on Tuesday, March 3d. The Dean, Prof. J. M. Bodine, stated that upward of three hundred students had been in attendance on the lectures during the session, while the graduating class numbered one hundred and twenty-six, the largest ever turned out by the institution. The addresses delivered on the occasion will be found in the supplement. The following is the "roll of honor," which we find in the *Courier-Journal*:

The Faculty gold medal for the best thesis was won by Dr. A. R. Booth, of Louisiana. Drs. W. G. Todd, Green Adams, J. S. Watson, E. H. Kaye, J. E. Harbold, J. G. Bohannon, F. O. Young, J. W. Wooldridge, H. H. Beck, H. B. Davis, M. A. Frawley, and A. B. Applegate received honorable mention.

The Shirley gold medal for the best thesis on public and private hygiene was awarded to Dr. Thomas P. Grant, of Kentucky. Drs. W. H. Henry and B. F. Spencer, also of Kentucky, received honorable mention.

The Hite gold medal for the best notes on the lectures of Prof. L. P. Yandell, jr., on clinical medicine was awarded to Dr. Albert A. Marrett, of Kentucky. Honorable mention of Dr. J. W. Wooldridge, Dr. Busey, and Mr. Coblentz, a first-course student.

The prize, a case of obstetrical instruments, offered by Professor Crowe for the best thesis on puerperal fever, was so evenly contested for by Dr. Isaac F. Holman, of Mississippi, and Dr. Alexander F.

Bueren, of Kentucky, that it was deemed just to duplicate the honor. A prize was thus awarded to each of the two competitors. Dr. John Kelly, of Kentucky, Dr. W. O. Harris, of Mississippi, Dr. Isaac L. Splawn, of Louisiana, and Dr. H. R. Boswell, of Alabama, received honorable mention.

The prize, a case of amputating instruments, offered by Mr. S. N. Jones, a well-known pharmacist of this city, to that member of the class who should stand the best examination in anatomy, was awarded to Dr. Isaac L. Splawn, of Louisiana.

Messrs. Arthur Peter & Fitch, wholesale druggists of this city, offered a fine case of pocket instruments to the member of the class who should stand the best examination in physiology. For this prize there were twenty-five contestants. The examination was a written one, and of the whole number two were so perfectly equal to each other that a decision could not be made between them. The two thus tied were Dr. W. G. Todd, of Kentucky, and Dr. James S. Watson, of Texas. Upon a second written examination the result was the same as that of the first. Prof. Palmer removed the difficulty by duplicating the prize. To Drs. Todd and Watson was therefore awarded for the best standing in physiology each a pocket-case of instruments. Honorable mention was made of the following gentlemen: Dr. A. F. Bueren, of Kentucky; Dr. I. L. Splawn, of Louisiana; and Mr. A. E. Neat, of Indiana, for the excellence of their examinations in physiology.

The prize offered by Mr. S. N. Jones for the best standing in Professor Cowling's class on operative surgery was awarded to Dr. G. F. Stewart, of Tennessee. Dr. A. R. Booth, of Louisiana, received honorable mention.

The prize offered by John P. Morton & Co. for the best notes on the lectures of Professor D. W. Vandell on clinical surgery was awarded to Dr. Tibbs Taylor, of Kentucky.

A MOVE IN THE RIGHT DIRECTION.—The following act to regulate the sale of medicines and poisons was recently passed by the legislature of Kentucky:

SEC. 1. It shall be unlawful for any person, unless a registered pharmacist, or registered assistant pharmacist in the employ of a registered pharmacist, or unless acting as an aid under the immediate supervision of a registered pharmacist or a registered assistant

pharmacist, within the meaning of this act, to retail, compound, or dispense medicines or poisons except as hereinafter provided.

SEC. 2. Any person, in order to be a registered pharmacist or a registered assistant pharmacist in the meaning of this act, shall be either a graduate in pharmacy, a practicing pharmacist, or a practicing assistant in pharmacy. Graduates in pharmacy shall be such as have obtained a diploma from a regularly incorporated college of pharmacy. Practicing pharmacists shall be such persons as at or prior to the passage of this act have kept and continue to keep open shops for compounding and dispensing the prescriptions of medical practitioners and for the retailing of drugs and medicines, and who shall have declared their intentions in writing of keeping open shops for the compounding of prescriptions of medical practitioners and the retailing of drugs and medicines; and all other persons who after the passage of this act shall have declared their intentions in writing to open a shop for compounding and dispensing the prescriptions of medical practitioners and for retailing of drugs and medicines, and shall have passed a satisfactory examination before the State Board of Pharmacy. Practicing assistants in pharmacy shall be such persons as shall have served five years immediately preceding the passage of this act in a shop or shops where the prescriptions of medical practitioners are compounded; and such other persons as have served three years' apprenticeship in a shop or shops where the prescriptions of medical practitioners are compounded, and shall have passed a satisfactory examination before the State Board of Pharmacy.

SEC. 3. The State Board of Pharmacy shall consist of seven persons, and immediately after the passage of this act the governor shall appoint from among the most skillful pharmacists of the state the first Board of Pharmacy; and on the first day of July of every third year thereafter the governor shall appoint the State Board of Pharmacy from the registered pharmacists of the state, the Louisville College of Pharmacy to recommend to the governor ten persons, members of said College of Pharmacy, four of whom shall be appointed on the State Board of Pharmacy. All vacancies by death, resignation, or removal from the state shall be filled by the board from the registered pharmacists of the state.

SEC. 4. Four members of said board shall constitute a quorum. Said board shall organize by the election of a president and secretary, both of whom shall sign all certificates and other official

documents. Said board shall meet twice a year, on the 15th day of January and on the 15th day of July, and shall have power to make by-laws and all necessary regulations for the proper fulfillment of their duties under this act. The secretary of said board shall also be registrar of pharmacists. The duties of said board shall be to examine all applicants for registration, to direct the registration by the registrar of all persons properly qualified or entitled thereto, and report annually to the General Assembly on the condition of pharmacy, together with the names of all registered pharmacists and assistant pharmacists.

SEC. 5. The duties of the registrar of pharmacists shall be to keep a book in which shall be entered, under the supervision of the State Board of Pharmacy, the name and place of business of every person who shall apply for registration. It shall also be the duty of the registrar to duly note the fact against the name of any registered pharmacist or assistant pharmacist who may have died or removed from the state or disposed of or relinquished his business, and to make all necessary alterations in the location of persons registered under this act.

SEC. 6. Every person applying for examination and registration under this act shall pay to the State Board of Pharmacy five dollars, and on passing the examination required shall be furnished, free of expense, with a certificate of registration. Any registered assistant pharmacist may, with the consent of said board, be entitled to registration as a registered pharmacist, and shall be furnished with a certificate of registration, for which certificate he shall pay the registrar one dollar. Every registered pharmacist and registered assistant pharmacist shall be furnished by the registrar of pharmacists with a renewal certificate annually, for which renewal certificate he shall pay one dollar.

SEC. 7. Any person not a registered pharmacist who shall after the passage of this act keep open shop for the retailing of medicines and poisons, or who shall take, use, or exhibit the title of registered pharmacist, or any person who shall violate any of the provisions of this act, shall upon the first conviction be sentenced to pay a fine of fifty dollars, and upon the second and every subsequent conviction shall be sentenced to pay a fine of one hundred dollars.

SEC. 8. The fees received for examination, registration, certificates, and renewal certificates, and all fines under this act, shall

be appropriated to defray the expenses of the State Board of Pharmacy.

SEC. 9. This act shall not apply to any town or city of less than five thousand inhabitants.

SEC. 10. Nothing in this act shall be construed to apply to any practitioner of medicine who does not keep open shop for compounding and dispensing medicines, nor shall it interfere with the making and dealing in proprietary medicines (popularly called patent medicines).

SEC. 11. This act to take effect on and after its passage.

THE LAST THING A PHYSICIAN LEARNS.—Dr. Pitcairn, who was the owner of the “Gold-headed Cane” immediately before Baillie, was said to be perfectly candid in his opinions, and very frank in acknowledging the extent of his confidence in the efficacy of medicine. To a young friend who had very recently graduated, and who had accompanied him from London to visit a lady, ill of a consumption, in the country, and who on their return was expressing his surprise at the apparent inertness of the prescription which had been left behind (which was nothing more than infusion of roses, with a little additional mineral acid), he made this reply: “The last thing a physician learns in the course of his experience is to know when to do nothing, but quietly to wait and allow nature and time to have fair play in checking the progress of disease, and gradually restoring the strength and health of the patient.”

SUPPLEMENT.

UNIVERSITY OF LOUISVILLE.

ADDRESSES

BEFORE THE

GRADUATING CLASS

OF THE

MEDICAL DEPARTMENT.

1874.

THE MEDICAL PROFESSION.

BY LUNSFORD P. YANDELL, M. D.

GENTLEMEN GRADUATES:

I appear before you on this interesting occasion at the request of your late teachers, the medical professors of the University of Louisville. I have been invited by them to address some words of welcome to you on your admission into the brotherhood of physicians, which the diplomas you hold in your hands accredit you as qualified and worthy to enter. This pleasant office has been assigned me in consideration of my long service in the profession and of the relations which I sustained for many years to the institution of which you have just received the highest honors. It seemed to your teachers appropriate that the first welcoming hand should be extended to you, and a God-speed invoked as you step upon the theater of professional life, by one of the oldest physicians of Kentucky, who was also a member of the faculty which took part in the organization of the school and conducted its earliest exercises.

The interest that may heretofore have attached to this relation in the minds of the alumni of the University is greatly enhanced by an event fresh in the memory of you all, which leaves me without any of my old associates in it. One after another of the men who participated with me in the first labors of founding a medical school in Louisville has been called away, until I am left the only living representative of

its original faculty. Caldwell, much the oldest of the body, and the admitted leader in the enterprise, and Drake and Cooke, his oldest colleagues, and like him men of learning and great powers of mind, have been many years in their graves. Cobb, Short, and Flint, who stood next in point of seniority, followed them after lives of great usefulness and distinction, which were extended beyond the ordinary term. And you were called a few weeks ago to unite with the medical profession of Louisville in the last offices of respect to the memory of the last of my honored colleagues in the faculty, Dr. Henry Miller, who died, like those who went before him, as full of honors as of years.

I am not here this evening to pronounce eulogies on these gifted men. Their names and labors have become a part of the fame of American medicine. Dr. Gross, I may remark, was not in the school with us at the beginning, but a distinguished teacher in one of the schools at Cincinnati, and only came to the Medical Institute at the opening of its fourth session.

When we set to work to build up the school thirty-seven years ago we were engaged in an effort to extend medical education a little farther toward the frontier than it had ever been carried before, and the spire of the old medical college was the last on our continent to reflect back the rays of the evening sun. We were convinced that the time had come when another school of medicine should be erected in the valley of the Mississippi, and that Louisville was the place for it. Transylvania had accomplished a great work; but her days were numbered. Lexington, "the Athens of the West," the literary as well as the commercial emporium of this state and of all the surrounding states when the school was founded, afforded no adequate means for clinical or anatomical instruction. The tide was setting against it, and all foresaw that the causes in operation must eventually bear down the school. It was hoped at one time that it might be transferred to Louis-

ville; but this scheme failed, and half the medical faculty, with Dudley, the most influential of them all, at the head, determined to abide its fortunes at Lexington. Louisville seconded our efforts with a noble liberality, and her municipal authorities promptly voted the Medical Institute an appropriation which assured its success.

Still at the outset our prospects were not unclouded, and there were some of our number who were by no means sanguine as to the result. To many outside the faculty the enterprise appeared decidedly unpromising. At Cincinnati were two powerful rivals, the old Ohio Medical College, with a reputation matured by nearly twenty years, and the Cincinnati Medical College, in the hands of Drake, Gross, and others of hardly inferior ability. Transylvania had been reorganized after the disruption of the faculty consequent upon the attempt at removal, and was believed by its friends to be stronger than ever. The citizens of Louisville were not generally hopeful of our immediate success. Almost every day the question was asked me by my friends, "Do you think you will have any students this winter?"

As dean of the faculty it became my duty to assemble the students that had come to the city in advance of the opening of the session, and well do I remember the circumstances of that meeting. It took place in one of the rooms of the old city work-house, on Chestnut Street, near the site of your present college-building, which had been fitted up by the city council for the use of the Medical Institute. The students who had come to aid in the inauguration of the new enterprise were just twenty-five in number. Only a few months before I had been lecturing in Lexington to a class of two hundred and forty-two. The contrast was somewhat trying, but I spoke hopeful words to the young men, all of which have been verified by the event. Before the session closed the class had swelled to eighty, or a little more than half the number of the graduates before me this evening.

The handful of students that I harangued in the lower room of the work-house that October morning in 1837 embraced some men who have since made their mark in the world. Dr. Athon was of the number, who has since been secretary of state for Indiana and filled high offices in his profession. Dr. Bayless, your late accomplished professor of surgery, was there. Dr. Jesse Rodman, who has been chosen more than once by his fellow-citizens to represent them in the legislature of the state, was of the number. Our fellow-citizens, Dr. Force and Dr. Seaton, who have been themselves since honored teachers of medicine, sat in the little assembly, with others whose names are familiar to the profession of the state.

Of the career of the Medical Institute, or of the University of Louisville, the medical department of which the institute was made by an act of the legislature of Kentucky in 1845, there is no need that I should speak to you at any length. Its growing classes, especially the increasing number of students who return to it or come from other schools to obtain its honors, is the best proof that could be given of the hold it has acquired on the confidence of the profession. I might be indulged, I suppose, in some complacent reflections on the work we accomplished, of which, except my friend Dr. Gross, I alone of all who took part in it during the first twelve years of its existence am spared to take a retrospect. Old men are proverbially addicted to praising past times and things. Nothing appears to them, seen through the haze of age, equal to what they saw and did in their youth or prime of manhood, and you would listen to me with forbearance, I believe, if I should indulge in a little boasting about what the University was in its earlier years. But while I certainly look back with some pride upon that age of the school, I am constrained to say that in my judgment it has lost nothing by time. Its present faculty need not fear a comparison with any former faculty. In ability as teachers, in all that renders medical

teaching attractive and instructive, the University has had none superior to them even in its palmiest days. If they claim to possess less learning than some of my old colleagues, they are better up with the times in their profession, and may well set their array of facts against the speculations which entertained the classes in the University twenty-five years ago.

Thirteen years before I came from Lexington to bear my humble part in the organization of the Medical Institute I had returned to my home in Tennessee from my first course of lectures in that elegant city, and had engaged in the practice of physic under the eye of my father; so that I come before you to-night with the experience of half a century in medicine. The feelings with which I revert to the events of this long term of professional activity are somewhat akin, I can suppose, to the emotions with which an aged mariner looks back from a safe and quiet haven upon the perils and hardships he endured at sea. The sound of the waves is still in his ears. The recollection of his trials stirs his pulse and brightens the decaying gleam in his eyes; but he is only affected by them as he sees his young friends, full of hope and ardor, embarking upon the same stormy sea. I have in the course of these fifty years seen our profession in all its aspects and colors. I have sounded all its depths and all its shoals, and tasted its pleasures and had experience of its discomforts. I have had pleasant association with great and good men in prosperous medical schools, and "drunk delight" such as ambitious young men feel in lecturing to large approving classes, and I know all about the hardships of country practice and the haunts, oftener seen in the city than in the country, "where lonely want retires to die."

And what is the sum of it all? "Vanity and vexation of spirit?" Enough assuredly, but not all. My old friend Dr. Drake once exclaimed to me, when vexed by some professional troubles, "Medical schools have consumed me." My experience of them is more favorable, and upon the whole I

can conscientiously congratulate you on your choice of professions. I have no sympathy with those who continually croak about its standing and its prospects. You will meet with such soon who ill-naturedly will try to put you out of conceit of your noble calling. They will tell you that medicine has lost its former dignity; that doctors are not respected as they were when they sported gold-headed canes. Pointing to what the profession was in that day, they exclaim,

“ Into what pit thou seest,
From what height fallen ! ”

But this is all a mistake. There never was a time in medicine equal in all respects to the present time. Never was there a period in its history when it was so safe, so rational, so scientific, so salutary. Never was it more respectable or so worthy of the confidence of men. In no age was it ever more instinct with a spirit of inquiry or more progressive; and as to its resources, the improvement is immense in our own times. Giants doubtless there were in medicine in the centuries past; but we who now pursue it have the advantage, in respect to time, of standing on their shoulders, and have thus a wider horizon than the tallest of them commanded. If the honored teachers to whom I listened in Lexington, when my friends Dr. Craik and Dr. Holland were students with me, could come back to us, they would wonder at what they saw, and feel that it was necessary to take up the study of medicine afresh. The pains in surgery and in childbirth which they were wont to look upon as inevitable they would find abolished. They would see, as you have seen this winter, operations once frightful because so bloody now performed without the loss of a drop of blood. All their fine theories they would find brushed away; their speculations that appeared so satisfactory supplanted by ascertained science; and the systems to which they were so wedded all gone; but they could not help rejoicing nevertheless at the improved face assumed by medicine since their day.

The profession of medicine is objected to on the ground that it is not remunerative ; that its fees are paid slowly and grudgingly ; and that the young physician has generally to wait so long before he gains public confidence. It has been affirmed that the probationer has often to wait "for a crust until he has no teeth to chew it when it comes." These complaints are of an ancient date, and certainly there is some ground for them. It tries the patience of the young doctor to see his claims so long ignored, and the practice taxes all his patience and powers of endurance when at last he gets it. When doctors wrote in Latin and put their best thoughts in verse one of them sang :

" Three faces wears the doctor : when first sought
An angel's ; and a god's, the cure half wrought ;
But when, that cure complete, he seeks his fee,
The de'il looks then less terrible than he."

But this libels human nature. Doctor's bills are not paid more tardily than pew-bills, and the merchant and the butcher would find it just as hard to collect theirs if they gave as long credit. We do not remember, when we thus complain, that most of the people in this world are poor people, and to them as a class belongs especially the heritage of disease. Emphatically were the words of the Savior addressed to physicians, "The poor ye have always with you ;" and their ability to pay their medical bills is apt to be taken away with the cause which created them. The sickness or casualty that brought the doctor has too often stopped the income of the house, so that when he sends in his bill the family exchequer is found empty. His bill proves to be the one straw more than the camel's back can bear. But as the cup of cold water given in a right spirit is promised its reward, those acts of mercy which pertain to the daily life of a physician may be followed by a higher recompense than gold or silver. The great Boerhaave said, "The poor are my best patients, for God is their paymaster."

The querulous old Dr. Samuel Johnson described medicine as a "melancholy attendance on misery, a mean submission to peevishness, and a continual interruption to pleasure." To my mind it is a recommendation of the medical profession that it brings us into contact with the gentle and the pure of the world, though peevish, rather than with the unprincipled and the abandoned; with sick women and children rather than with rogues and murderers. Doubtless such association fosters a feeling of self-esteem, and may beget a tyrannical temper. Men who measure themselves habitually with others who receive implicitly their opinions and yield without a word to their commands are apt to grow conceited and impatient of contradiction; but this weakness is effectually cured by larger association with men of business and other professions.

It is a grave charge often brought against medicine that its pursuit is not friendly to the Christian faith. I think the allegation is unfounded; or if there be any foundation for it, it grows out of the fact that physicians find in their professional engagements an excuse for neglecting the chief means of confirming a religious faith. Too often "Sunday shines no Sabbath-day" to the physician in laborious practice, and too often the excuse of business is made by others not engaged who have no regard for the day. The truth is not heard and can not exert its legitimate force. That which should convince them is not understood. Whatever may be the other aids to faith, there is nothing like the gospel, which it has been well said "is emphatically its own witness, which shines in the light of its own evidence, and by its proclamation accredits and authenticates itself." The neglect of the church then, and not any thing in medicine, is the cause of infidelity. There is every thing in the practice of medicine—in the scenes of which medical men are constant witnesses—to impress them with the inestimable value of a strong religious belief. And as to the study, I need only remind you of the remark of the old pagan anatomist that the human frame is a perpetual hymn

to the Creator. Medicine, which is the study of nature, ought to conduct up to "nature's God." As a class, it is conceded that physicians have been distinguished for "liberality and dignity of sentiment, and for their readiness to exert a lucrative profession where there was no hope of lucre." Nor have more splendid examples of Christian character been afforded by any other class.

But I am detaining you too long from the pleasure you are expecting in the lecture of my young friend, Professor Palmer. Let me say in conclusion that I hope you are penetrated with a proper sense of the dignity of the profession upon which you are entering. Toilsome, anxious, often irksome and vexatious, always responsible you will find it. But it is worthy of all the respect you can bestow upon it—worthy of your admiration and all your energies. In an age when its curative resources must have been very small, Homer said:

"A wise physician skilled our wounds to heal
Is more than armies to the public weal."

It will give you independence if you pursue it industriously, and social position if you show yourselves worthy of your profession. It opens up to you as a study boundless fields of inquiry, and in its highest problems affords scope for the exercise of all the faculties of your minds. The University expects you to do your duty. Your teachers will all unite with me in the wish that *Iter ad astra* may be written in clear characters over the paths of you all. They expect you to transmit your profession unimpaired in dignity to those who shall come after you.

INTELLECTUAL CULTURE.

BY EDWARD R. PALMER, M. D.,

Professor of Physiology.

When I was notified by the Dean that my turn had come, in the regular order of succession, to speak the faculty farewell to you, gentlemen of the graduating class, I remembered that it is just ten years since I received the medical degree at the hands of the distinguished Mr. Guthrie, so long President of the Board of Trustees of this University. I have never forgotten the exercises and incidents of that evening, and I am quite certain that you will retain a vivid remembrance of this evening of your graduation, freighted as it is with so much of joy and hope for each; joy in the fruition of your scholastic labors, and hope of a future full of honorable usefulness; and well do I know, could the castles your busy minds are now building spring by a magic touch into living, visible realities, they would far outrival in the splendor of their tracery and design the romantic beauties of ancient Venice or the gorgeous wonders of the palace of Aladdin.

Such day-dreams are not unworthy of you at an hour like this. We participate in your happiness, and I but speak the common sentiment of all this great assemblage when I wish for you in your future careers unbounded success and perfect happiness.

To-night marks an epoch not alone in your careers, but in that as well of your Alma Mater. Like human life, hers has had its lights and shadows. Founded when Louisville was yet an infant city, she soon attained a success and renown which attracted the admiration of the entire medical world.

The brightness of her morning splendor was not, however, destined to continue without interruption. A series of unfavorable developments which culminated in our recent war darkened her sky and sorely tried the confidence of her friends. The winter of 1862-63 came and went before her unopened doors. The patron of the art preservative of life hid her abashed face in the presence of an angry host bent upon life's destruction. The following fall a handful of students assembled, and with many misgivings on the part of the faculty lectures were resumed. At the close of that session eighteen of us constituted the graduating class, the smallest class the medical department has ever sent forth. Mr. Guthrie, advanced in years, yet firm in mien and unfaltering in speech, addressed us in that impressive style which so well became him. The father of the University and its warmest friend, he had watched its course with unconcealed anxiety; yet even in that its darkest hour he saw the silver lining of the clouds, and prophesied the advent of a refulgent sunlight which would bathe its historic walls with noonday brightness. This day, this hour, witnesses the fulfillment of his prophecy, and we can well imagine his proud satisfaction, were he still living, while contrasting the exit of the few ten years ago with the ovation of this commencement, which ushers through the open portal a class larger than the largest of the olden time, and fully its equal in intellectual worth. With us it is a night for mutual congratulations, and one that can never be forgotten.

Your lives, which have thus far been like rivulets, confined within the narrow bounds of college rule, escape to-night from the old familiar surroundings into the broad expanse of life's vast ocean. With the shore still near at hand you dream of success and home, while the friends and former guides from whom you are now severing are wishing you prosperity and happiness. To-morrow the struggle begins, when dreams must give place to work, and when each must strike out

lustily and persistently among the waves if he expects to keep his head above the breakers.

It has been said that advice is a cheap commodity, and often dear at any price. Notwithstanding this, I am going to preach you a sermon to-night in an advisory strain from THE EXPERIENCE OF A DECADE IN THE DOCTORATE.

In seizing the reins of the Esculapian steed you are as it were grasping the poles of an electric battery, whose successive shocks will shake almost every tenet of your student faith and threaten you with an absolute skepticism. I trust, however, that you possess a nature that will not falter when the fancies you have builded in student-life fall before the realities of actual practice. You have already discovered that the handsome descriptive plates of your anatomical text-book are quite unlike the actual dissections which your scalpels have made, and what seemed quite simple, viewed by light of text and plate, was soon vested with unexpected difficulties when sought for with the knife; so also in the field of practice will you often strive in vain to fit the text of the book to the language of the sick-couch. You have studied with commendable zeal descriptions of disease and the action of remedies; but you have yet to study the nature of mankind, and learn humanity as well as its diseases. This is particularly the case when we view the totality of a physician's life. Like ordinary life, it is made up of little things. You are not going forth to wage a constant battle against grave diseases. Serious cases will arise now and then, demanding your best medical skill and knowledge; but what will really try your abilities the severest are the little things of daily practice. A patient who is not very ill has both time and inclination to analyze his medical adviser, and you must make up your minds to be probed at such times more skillfully than ever surgeon probed patient.

It is quite often a complaint of the smart young graduate that Dr. —, his neighbor, whose ignorance of medical books

is locally proverbial, has so much practice, while all his knowledge lies idle in the well-filled vaults of memory, waiting in vain for a requisition from the sick. Versed as this young doctor is in the pathology and therapeutics of grave disease, he may now and then teach his senior a valuable lesson; but he will find in return much that is worth knowing in the so-called "hard sense" of his successful though unscientific elder brother.

I do not purpose by this assertion to underrate the valuable knowledge you have thus far gained. Foster it, and be proud of it. But what I wish to impress upon you is that such knowledge forms but one part of all that is required in the superior physician. Moderate success may be won with "hard sense" alone; moderate success may be won with a knowledge of books alone; but both of these must be combined in order to insure that high success to which I trust each of you aspires; and, while the elements of the former must be instinctive with the possessor, they are nevertheless susceptible of a high degree of cultivation. How is this cultivation best advanced?

An eminent philosopher has recently written: "This faith in lesson-books and readings is one of the superstitions of the age. Even as appliances to intellectual culture books are greatly overestimated. Instead of second-hand knowledge being regarded as of less value than first-hand knowledge, and, as knowledge, to be sought only where first-hand knowledge can not be had, it is actually regarded as of greater value. Something gathered from printed pages is supposed to enter into a course of education; but if gathered by observation of life and nature is supposed not thus to enter. Reading is seeing by proxy—is learning indirectly through another man's faculties instead of directly through one's own faculties; and such is the prevailing bias that the indirect learning is thought preferable to the direct learning, and usurps the name of cultivation."

This extract from the writings of one whose views are widely read and accepted serves to show you that wisdom is by no means always found with greatest certainty by reading books. You must bear in mind also in this connection that books supply the reader with one form of mental food, and that intellectual dyspepsia as well as gastric dyspepsia may follow upon injudicious feeding. In supplying the wants of the body, however good a dinner may be, one does not want to eat it all day long, nor by any means does one desire the same dinner every day in the week, still less the month or year. So also of books; you should read something each day—read medicine—but in the name of all that is wise read something else besides medicine; at the same time never neglect to observe and reflect whenever and as often as is possible. The tendency of reading to the neglect of observation and due reflection is greatly to narrow one's mind; and of all men the doctor should cultivate a broad and liberal spirit, sedulously avoiding ruts as dangerous to both his usefulness and happiness. Among the various benefits which a broad and liberal culture is apt to bestow upon man is naturalness—an unconstrained ease of manner. One can not read Hamlet's advice to the players without being struck with the applicability of much of it to the newly-fledged doctor. To be natural is to him every way most desirable. Of all things distasteful to persons of taste nothing is more so than a pompous doctor, whose long scientific terms, solemn airs, and funereal garb, while they may impress the ignorant that he is vastly learned, will with greater certainty inspire young children with dread and sensible grown people with serious doubts as to his ability. Remember always that with cultivated people solemn pomposity usually passes for a cloak to ignorance. An ostentatious mannerism is a very different thing from that easy dignity which intuitively adapts itself to surroundings with a readiness which marks true gentility.

This ease of manner is not the only benefit you will derive from liberal culture. The fund of varied knowledge you have thus stored up may often, when medical skill is uncalled for or of little avail, serve as a power for much good in your hands. In the social circle, where all is health and vivacity, your wit and learning, as they excite the throb and flush of pleasure in others, will excite the throb and flush of happiness in you. Far more in that dreary abode where the hours are as days and monotony rules relentlessly—the chamber of tedious convalescence—can you wield for positive good the power of variety in learning. To the invalid on his couch the quick step on the stair is no longer “the leech’s stealthy tread.” It means to the sufferer a respite from self; it means a respite from a study of the pattern on the wall; and, more than all else, it means a few moments of bright sunshine that will leave behind them hours of blessed twilight. Never fear that such knowledge will make you pedantic. Pedantry is the especial perquisite of the book-worm, while one of the many offspring of varied culture is that nice discernment and large recognition of things, called tact—a most desirable quality, and one which prevents pedantry and like evils, and vests the possessor with more power than any other one attribute he may have.

If then your ambition’s aim is high success, you must combine the observation and study of social life and of nature with the observation and study of disease, and read general literature as well as medical.

In recognition of the truth of part of what I have just said, it has been asserted that the excellence of the English physician is largely due to the fact that travel so uniformly enters as a prominent part into his education; for “travel is the opportunity that best enables man to combine study, thought, and observation.” It is long since I have read a more interesting book than the late Sir Henry Holland’s “Recollections of a Past Life”—a life which abounded in travel. Few

careers have been more enviable in every respect than that of this finished scholar and wise physician.

It can not of course be the good fortune of many of you to travel in foreign parts, but there are leisure seasons in the life of every doctor when he owes it to himself and his patrons to break through the boundaries of his professional circuit, and leaving his medical paraphernalia behind go forth and see what is taking place in the world without. Each year the American Medical Association invites the brethren throughout the states to throw off their medical harness and come together for social enjoyment and an interchange of thought. A week away from home, spent at one of these gatherings, is medicine to the professional man's physical nature and food to his intellectual. In your future life you will never regret a resolution well carried out to snatch each year a short respite from the labors of practice and spend it in travel and sight-seeing.

I have always thought an important part of the student's education while here is contact with and observation of the customs of a large and populous city, and you will bear me witness that I have frequently counseled you not to cling too closely to the grooves of college-life, but to take advantage now and then of the outside opportunities which offer for social and intellectual enjoyment and improvement. In like manner do I advise you to seek often in the future the society of intelligent and cultivated people as one of the surest means for increasing cultivation and refinement in yourselves. To the poet's fancy, when the world was young, man was a sighing hermit till woman smiled, and in the prosaic reality of our day he is far worse than that if he bears not in his nature the impress of her gentleness and her soul. When no call of duty summons to other scenes let the society of the fair and the conversation of the wise be to your admiring eyes and willing ears an oft-sought pleasure.

When you have selected your future harvest-fields, and sit watching for the first sprouting of the seeds of wisdom you

have therein planted, do not be beguiled by the fallacy that a year or two more of unapplied medical reading will make better doctors of you. Thus far you have read with your graduation as an object in view ; from this hour you read with a view to practice, and the sooner and oftener you combat disease the sooner will you become good doctors. It is known that unless physical exercise has some object in view apart from the mere movement of muscles it is devoid of good to the invalid. So in the reading of medicine the doctor must needs have some case in mind as an object if he would derive material benefit from his studies. The objection has been urged that plenty to do debars the young physician from needful reading. That active practice might be used by him as an excuse for such neglect is possible, but that it will actually prevent him from study is not probable. Indeed to my mind nothing will so often and so imperatively send him to his books as the exigencies of practice. Where there is a will to read the way and the time can readily be found, and the busiest physicians of this city to-day are many of them the most assiduous readers, not only of medicine, but of general literature. The study of my illustrious colleague, the Professor of the Science and Practice of Medicine, filled as it is with the latest and best publications of the day, furnishes marked evidence of this notable fact.

I remember when I entered the profession being told again and again that the paucity of my patients was my good fortune, as a blank visiting-list gave an abundance of time for study. It was some years before my time was any thing like occupied among the sick, and I well remember my faithful efforts at systematic reading, and how, after a few months, the whole subject became so monotonous that a distaste for treatises on disease and its remedies took such possession of me that I despaired of ever being a successful doctor, and became almost half convinced that I had mistaken my vocation. Under that cloud I laid my Watson and Stillé aside

and spent much of my leisure time with the best poets, essayists, and fiction-writers of the age. As I remember now the course I took, it is with a pleasure which more than repays me for the serious misgivings I then felt in thus supplementing the course which my seniors had advised. Perhaps it was this experience which has led me to believe in a doctor's being a man of varied learning, and in his cultivating a taste for some improving pursuit or study with which to occupy his leisure hours.

In indicating intellectual recreation for you I can by no means specify a common course for all or a definite course for any one to follow. Each must needs pay due heed to his tastes and opportunities. The vast domain of natural science is open to you, inviting to a study that will not only give pleasing variety to your lives, but at the same time enlarge your minds and improve your understandings. Ask him who in the ripeness of his years looks backward while you are looking forward, the senior Dr. Yandell, if he regrets the hours of rare pleasure spent by him in geologic research, and he will tell you with more weight than I can the real pleasure and benefit to be gained by combining such studies with that of medicine. Ask others, who in the countless fields of animated nature have unveiled its wonders and brought to light its hidden beauties, if they have suffered by such lapses from professional routine and study, and they too will answer in a similar strain. Would that the lamented Bayless were here to speak for the many hours which he spent so happily and so profitably among those "stars of earth's firmament," the beautiful flowers.

I am speaking to men most of whom will live apart from the bustling life of large cities, in regions where spare time is apt to hang idly on one's hands, and I know the nature of the temptations that will at such times beset them. Let me sketch you a picture of one of these temptations, and in contrast with what I have been advising. Each of you can

easily add the finishing touches. It occupies the foreground of a typical village. A country store; before the door a long, low bench, well notched by industrious pen-knives; a broken chair or two on either side; and yonder, standing demurely at the hitch-rail, a saddle-mare, well laden with the household goods for which some worthy dame has just exchanged her last week's churning. In the doorway, leaning against the side, and divested of coat and hat, stands the village merchant, while, deepening the notches in the bench or tilting on the chairs, the village loungers while away the sleepy hours. They smoke and chew and chat and laugh, talk of the news, the latest foal, or the price of corn—good fellows, whom we all like, and whose opinions upon stock-raising and planting are by no means to be lightly estimated. Now and then they slap a well-dressed comrade on the back and familiarly call him "Doc." He is in high favor at the store, a sort of chairman of the gathering. Have you ever seen this picture? Be careful how you make a constant figure in it. You will go there with an eye to business, and will teach yourselves to believe that with the people "good fellow" means "good doctor" also. Guard against such a course and such fancies, however much you may desire to increase your practice. It is easy enough to stop as you pass for a momentary exchange of good-will without becoming a stereotyped member of that little party; and, believe me, the country people, like those in cities, take most pride in a doctor who from his refinement and superior education can find little pleasure in such idle associations. He is expected to be the first man of his neighborhood, and the higher and broader his culture the more is he revered, beloved, and sought after, provided always that the true gentleman is there as well as the scholar. Another picture hardly less objectionable could be drawn by transferring the scene and the actors to the doctor's office. I have known such places that looked more like the card-room of a corner saloon than the habitation of science and

culture, and I urge you to discountenance, from the start, idling in your sanctum. This can be done by you without giving offense, and if commenced early may be accomplished easily. Let me remark here in passing that a well-furnished, well-kept office, one that has an atmosphere of studiousness and cleanliness pervading it, will go far as a legitimate means for increasing your practice. A doctor's office should be something more than a barren room, with a bare floor, few chairs, deal-tables, and dusty slate. Like the dress of woman, it is a gauge of one's taste and culture, and when neat and cozy will exert a sanitary influence upon both the possessor and his patrons. The same principle is true as applied to the doctor's personal appearance. An eminent lawyer, advanced in years, while recounting some of his reminiscences of the law, gave the following instance of the effect which a lawyer's personal appearance has upon clients: "It sometimes occurs," said he, "that a prisoner at the bar presents himself for trial without any counsel, and as the law will not try a man unless he be defended the judge instructs the accused to select counsel from the lawyers who are present. Nine times out of ten he selects the one who is cleanest and best dressed; and," said the lawyer, "ninety-nine times out of a hundred it is a wise choice. In his uneducated wisdom, which the world calls shrewdness, he reasons to himself somewhat after this manner: 'This lawyer is a self-respecting man. He is a man who respects also the requirements of good society. He is a man with a good sense of justice. His dress betokens prosperity. If he were a rich man he would hardly be here; therefore his prosperity is due to his success as a lawyer, and he is successful because he is a man of ability.' Once in a great while the prisoner chooses a lawyer despite his unkempt exterior because he looks wise; but of such he usually reasons in this way: 'This is evidently a smart man, but with his unclean person he probably has unclean morals, or with his ragged coat an eccentric character, and neither of these will

serve me in my necessity.'” The moral of this anecdote applies with even greater force to the doctor who, avoiding dandyism on the one hand and slovenliness on the other, should always present a neat and cleanly exterior to the sensitive sick people who may require his services.

This is, however, somewhat of a digression, though I trust a pardonable one. I was speaking of the doctor as a man of varied learning and refinement.

In the matter of general reading I may perhaps be somewhat more explicit; and first I will say subscribe for one of the excellent weekly newspapers which emanate from our chief cities. A Tribune, a Sun, a World, or a Courier-Journal dropping in once a week will keep you informed with the progress which our globe is making in the various departments of science, art, and learning. The valuable columns of a first-class weekly paper, such as our Courier-Journal, constitute a faithful map of busy life, and will go far toward preventing your falling into a fossil state. In this same direction it will not be amiss for you to take one or more of the reviews or leading scientific periodicals which appear monthly or quarterly, reflecting the ideas of the leading thinkers of the day. Against the trashy, sensational stuff with which the country is too much flooded I can not too forcibly warn you. Such productions, false as they are to life and nature, are debasing in the extreme when read, and I gladly turn from them to suggest such writers as Taine and Ruskin in art; Dana, Tyndall, and Helmholtz in science; Macaulay and Carlyle in essays; Thackeray and Dickens in fiction; and that great world of humanizing, immortal verse, in the past adorned by Shakespeare and Milton, and in the present by Longfellow and Tennyson, not forgetting that school which Hood rendered famous, and which our own Saxe and Holmes to-day so richly grace. These or any of the writers belonging to the classes represented, and whose productions are not deemed unworthy of careful perusal by the best minds

of the day, may well occupy a goodly share of your leisure moments.

These views, partly the result of experience, are also largely due to early associations, and are, I am convinced, not only safe but excellent precepts to inculcate at this time. Whenever my memory reverts to him who was once pre-eminently dear to me—a patient friend, a wise counselor, a loving father—I most frequently think of him as a student and admirer of such authors as I have just named. At such times I love best to picture him as he spent many of his leisure hours with a volume of the immortal novelist of Scotland in his hand, absorbed in the contents of its oft-read pages, and well do I know the rare pleasure he was wont to draw from those matchless tales of feudal times and Scottish chivalry.

The following anecdote is told of the late Lord Jeffrey, who was a fervent admirer of Charles Dickens: One day a lady surprised him sitting in his library, his eyes suffused with tears, and was about to withdraw, when he led her to a seat and said, "Don't go; I shall be right again soon." "Have you received bad news?" asked the lady; "is any one dead?" "Yes," said he solemnly, "Little Nell is dead. Are you not sorry?" He had just read the last number then out of the "Old Curiosity Shop."

Who among you would not rather have a soul of kindly sympathy in his nature, ready to respond to the sorrows or the joys of others, than to be a mere machine, with no ideas above pills and potions? And yet the very life you are now about entering will dim every kindlier faculty of your nature if you allow yourselves to narrow down into the bare routine of every-day practice. I am reminded, as I write, of one far nearer to us than Lord Jeffrey, who also found unutterable pleasure in the pages of England's great fiction-writer—the loveliest character and one of the noblest intellects that ever graced the halls of our University with his teachings, or enriched medical literature with the pen—the lamented Bartlett.

In an allegory written by him upon the familiar story of "Hard Times" there appears the following gem, which so befits this occasion that I give it you in full :

"This was the lofty moral of his creed,
That these were man's chief duties : trust in God ;
The doing of his will in serving man
With earnest work and words of kindly cheer ;
Always with work and words, for good, not ill,
Since man is bound to man by subtle bonds
No strength nor craft can sunder or untie,
For help or hurt, for blessing or for bane ;
Hands washed in innocence—the wayward heart
Kept with all diligence ; and a daily life
Unspotted from the world through which it flows."

By no words of my own can I so well indicate to-night the moral element which is necessary in the lofty character of the true physician.

I am well aware that there are those of the profession who differ from me in much that I have said, and who hold that a doctor should give his whole time to his special science if he would master it and attain eminent success. With due deference to this opinion, I make this plea for more varied intellectual cultivation in our ranks, convinced that one of its most certain effects will be not only to make us better and happier as men, but to make better doctors of us, and give a more exalted position to our vocation, which is justly called one of the learned and liberal professions.

On an occasion like this, when but little more than a parting word or two is expected of the speaker, it is manifestly impossible for him to say many things that would otherwise be eminently proper, and it may perhaps appear to you that in speaking of the doctor as a liberal scholar I have neglected giving due prominence to the importance of his being profoundly versed in his own special science. To have told you that your chosen calling must ever stand first with you ; that medical literature in its newest and best forms should be eagerly sought for and carefully studied by you ; that patient

painstaking, care, and watchfulness must ever be unfailing traits of your character; in short, to have told you throughout the hour that your new life will be one of grave responsibilities, demanding untiring mental and physical energies, would have been but a trite recital of what you already know or will quite soon learn. For this reason I have passed these important precepts by, and also because I wished to arouse in you, now in the plasticity of your young manhood, an ambition not by any means incompatible with your great life duties. My colleague, the Dean, in his admirable introductory address of 1872, called your student-life "the novitiate of that true nobility of our times, the aristocracy of intelligence." The true nobility rather of *all* time, and on whose royal roll, mingled with the names of Plato and Galileo, of Göthe and of Newton, shine those of Sydenham and Chomel, of Rush and of Niemeyer. A nobility which, like those by monarchs made, has fought even to death in defense of a cause; but which, unarmed with fire and sword, has ever battled for truth and right against error, superstition, and wrong. Its aim unerringly the elevation of mankind, dispensing true charity with a lavish hand, illuminating the darkness, planing down the rugged places, and bridging over the deep abysses, enlarging its power from age to age, and opening its teeming vaults that a whole world may enjoy the blessings which its wealth bestows—a glorious nobility, whose untainted letters-patent kings can not cancel and wealth can not purchase. It had its cradle among dynasties long since passed away. In the ages of tyranny and oppression its lamp still burned, though hid for the hour in the humble attics of its faithful votaries; but now that growth of national and religious liberty of which it is the father has untrammelled its hands and widened its scope of usefulness. No age, no principles of government have ever existed so favorable to the growth of its power as ours. By education, by history, by all the laws of social life, the physician belongs to this lofty brotherhood of learning. And yet

how few of the profession in this land feel the grand import of this truth! The physician who lowers his calling to the level of ordinary mercenary pursuits rarely amasses wealth, and invariably sacrifices a higher and a purer joy, the joy of being one of the noblemen of letters. He feels so often the littleness of his compensation; he sees so soon the vanity of his hopes; and if he adheres to his calling, does so regretting that he has assumed a life of hardship and small reward. That so many follow this course is not surprising. In a land where money is so universally worshiped we need not wonder if the scholar too prostrates himself at that fane. Such should not, however, be, and the day will surely come here as well as in older lands when the aristocracy of learning will hold undisputed supremacy. In the midst of that engulfing tide of mankind which rolls to-day through every avenue of this fair land, restlessly seeking for wealth, you stand witnesses rather than participants. But in the purer stream which flows from the Pierian fount you may find, if you will, a proper channel for your intellectual training. Never forget then that the diploma which you now hold certifies that you are enrolled in the "aristocracy of intelligence," and let it ever be your proud ambition as you advance in years to advance also in scholarly wisdom, so as days ripen into years and seed-time rolls to harvest-time,

"At the full breasts of wisdom clinging,

Thou 'lt find each day a greater rapture bringing."

But enough; I must close ere you grow restless with delay. The hour of our parting is at hand. On the bosom of yonder swollen Ohio a goodly boat lies waiting to bear a part of your number to the land of sunshine and of flowers.

On the banks of the "Father of Waters," in the balmy air of the gulf, and far and wide through the fertile lands of cotton and of cane,—

Where the orange-groves open their soft golden bloom,
And the spotless magnolia fills the air with perfume;
Where the mild breeze of heaven a rich melody floats
That is trilled by gay songsters in amative notes;

Where the plowman, new turning the rich fallow soil,
Is cheerily whistling, in joy with his toil;
And even the cypress, that emblem of sadness,
Grows green and alive with bright vernal gladness,—

all nature smiles her happy greeting, and anxious hearts are waiting ready to welcome you home. Not less the welcome in keeping for others of your band in the fertile, wide-spreading prairie lands of the West or the rich mineral fields of Pennsylvania and Virginia. The great commonwealth that once nurtured for her country's glory that hero and statesman, the immortal Jackson—east, middle, and west—waits in pride the coming of her sons. Over the river a sister state is ready to rejoice in the new ties that bind her still more closely to old Virginia's proud daughter, while at scores of Kentucky fire-sides busy, loving hands pile higher yet the blazing logs, and spread an old Kentucky welcome for the "boys" who are coming home.

Go, and may joy mingle its sweets with the blessing which your Alma Mater sends with you through life. Go proudly to those who await you. Go bravely to the duties in store for you. Go confident in your power to soothe the brow of pain. Go faithful to her who has trained you and taught you the rudiments of your art. She will not forget you. She will never lose her watchful interest in you. In your prosperity she will rejoice with you, and should reverses befall her strong right arm is ready and willing to sustain you. Her words of parting counsel are those of peace and love. She bids you remember the ties of professional brotherhood; to be slow in thinking evil of a brother, quick to defend, and charitable where fault is manifest. Life has enough asperities without your adding one jot to the burden. Forbearance and charity are the central jewels of earth's richest diadem, and brotherly love is the sum of human perfectness. Farewell!

THE AMERICAN PRACTITIONER.

MAY, 1874.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Communications.

CLINICAL CONTRIBUTIONS TO DISEASES OF WOMEN.

BY THEOPHILUS PARVIN, M. D.

I propose to narrate five cases of uterine hemorrhage, accompanying each with the treatment pursued and remarks thereon.

CASE I.—Mrs. M., age forty-five, has been quite “irregular” for the past year, the intervals frequently being prolonged to six or eight weeks, but there being no other menstrual derangement. Recently, after a three months’ absence of discharge, she became unwell. The flow was moderate and painless for a week, and then became quite profuse, and was accompanied with a good deal of continuous intra-pelvic pain. She had first quinine and then ergot, but neither gave any relief. The second night after the commencement of the metrorrhagia, getting out of bed to empty the bladder, the hemorrhage was so copious that she fainted. Upon vaginal examination—permission to do which had been refused at my previous visits—I found neither uterine displacement nor any great uterine enlargement. There was no time to be lost, for the hemorrhage, checked by her fainting, was now returning. A solution

of muriated tincture of iron—one part of the tincture to eight of water—was immediately thrown into the uterus, and the flow was promptly arrested; it returned again in four hours, and the injection was repeated. There was no subsequent return of the trouble.

CASE II.—Mrs. D., four weeks after delivery of a healthy child, which she nursed, having an abundant supply of milk for it, had metrorrhagia. Rest, ice-cold acid drinks, quinine, ergot, and opium were all tried—some together, others separately—without any material effect in moderating the flow, which, while profuse, was painless. An injection, such as was used in the first case, was then resorted to, repeating it thrice within thirty-six hours, and the hemorrhage became so slight as to be insignificant, in a few more days ceasing altogether.

Remarks.—It is no uncommon thing for metrorrhagia to occur at the climacteric, as it did in the first case; but it is rare for it, when purely functional, to be so obstinate. It generally yields well enough to rest, cold drinks, etc. But where it is persistent—and still more, where immediately or remotely perilous—there is no time to await the uncertain or slow action of remedies administered by the mouth; better apply styptics directly to the bleeding surface, sealing up those ruptured vessels which are pouring out the blood which is the life; and where there is no uterine flexion, and the cervical canal is quite pervious, I believe the best and the promptest method is to throw an astringent injection directly into the uterine cavity.

In the second case, was the flow a menorrhagia or a metrorrhagia? Not the former, because six weeks after parturition is the rule for the return of menstruation in women who do not nurse. This flow was four weeks after parturition, and in a healthy woman who was suckling her infant. It occurred too, I ought to have stated, some days after the complete disappearance of the lochia. The case represents one of the varieties of uterine hemorrhage which the practitioner is not unseldom called to treat. This variety has been attributed to secondary inertia of the womb, to uterine con-

gestion, to an alteration of the blood, and by Hervieux, in his treatise on puerperal diseases, to puerperal poisoning in some cases. But the true cause, as Dr. Le Blond* observes, has been given by Joulin; viz., the condition of the circulation in the newly-formed mucous membrane of the uterine cavity, the net-work of capillaries being so thin that rupture readily occurs under blood-pressure. Standing, walking, or other exertion, or even mental excitement—possibly too simply uterine pain—may cause a slight congestion that soon terminates in a hemorrhage.

Le Blond remarks that these hemorrhages are readily controlled by rest, the horizontal position, ergot, digitalis, and intra-uterine injections. The first two are all-important; the third we have little faith in as a remedy for this variety of metrorrhagia; the fourth we have never tried; and the last we believe to be best of all. It is hardly possible that the uterus should be so flexed, or the cervical canal otherwise have its caliber diminished, to contra-indicate the free use of intra-uterine injections. Still more are we inclined to advocate such local therapeutics in any case of this kind where the hemorrhage is at all profuse, since the two agents which are the most valuable—worth all other internal remedies, we believe—in some varieties of menorrhagia and metrorrhagia, are comparatively, if not completely, inert in this; those two agents are quinine and ergot.

A further remark may be made as to this variety of hemorrhage, that ordinarily it is painless and persistent, in these respects differing from that which occurs from retention of a portion of the placenta; this generally coming on suddenly and with pain, and then a temporary cessation, the attacks renewed time and again until art or nature rids the uterus of the foreign body or else the patient dies, the latter a contingency which has happened even when the placental fragment was no larger than a hickory-nut.

* Churchill on Diseases of Women. Second French edition. Paris, 1874.

CASE III.—Mrs. V., thirty-five years of age, has been perfectly well for years, has given birth to one child, never had leucorrhœa; menstruation is quite regular, but is usually protracted to ten days, and sometimes is quite profuse; was suddenly attacked on the fourth day of her flow, which was rather freer than usual, with acute pain in the lower part of the abdomen, followed by faintness and prostration, her skin becoming quite cold and pulse exceedingly weak; nausea and vomiting, vesical and rectal tenesmus. The next day reaction had occurred, and she had some fever and tympanitis, with great tenderness in the hypogastric and left iliac regions. Two weeks after her medical attendant, upon his first vaginal examination, discovered a large and hard tumor posterior to the uterus, which was thereby displaced forward.

I did not take charge of the case, nor see the patient indeed, until six weeks after the illness commenced. Manifestly this was a case of pelvi-peritonitis consequent upon retro-uterine hæmatocele, or, if you please, *metrorrhagic pelvi-peritonitis*. It is foreign to my present purpose to detail the treatment instituted; but of course the next monthly flow was anticipated even with more than the usual anxiety which the practitioner entertains with reference to this function in cases of pelvi-peritoneal inflammation, for it may be the crisis, or probably still oftener the aggravation, of this disease. It commenced without special suffering, and thus continued for five days, when it became both profuse and painful. Four grains of quinine were given every three hours until four doses were taken, and the discharge, by this time quite moderated, ceased in about twenty-four hours thereafter.

Remarks.—The case just mentioned illustrates the value of quinine in this form of menorrhagia. It is probable that this agent has a power, as Dr. Bartharez has said,* of acting directly upon the vaso-motor nerves and also upon the muscular fibers of the uterus. We may remark, in passing, that Gueneau de Mussy, who has been one of the chief advocates for the use of quinine in uterine hemorrhage, has also successfully used this medicine in hæmoptysis. But returning, quinine should not be given, says this authority, in hemorrhage threatening abortion; for by causing uterine contraction

* *Du Traitement des Hemorrhagies de Matrice par le Sulfate de Quinine.* Paris, 1872.

it may hasten the accident we seek to prevent.* One of the most striking illustrations of the value of quinine in diminishing uterine congestion is given by Dr. Vital,† where an inverted uterus was reduced in the course of a week one third by the internal administration of this remedy.

CASE IV.—Mrs. B., forty-one years old, married five years, but has never become pregnant, consulted me last September for an abdominal enlargement and menorrhagia. This enlargement proved to be a uterine fibroid. The enlarged uterus reached quite up to the umbilicus, and my recollection is the tumor was situated in the anterior wall. Menorrhagia had existed for nearly four years, and her health had become much impaired by it. She suffered considerable pelvic distress, and also pain and uneasiness in the lower limbs from the downward pressure of the growth. The greatest abdominal circumference was thirty-nine inches.

As the patient lived at a distance from me and could not remain under my treatment, I wrote to her physician, Dr. Cushman, of Graysville, Ind., advising the hypodermic use of ergot, and suggesting the following formula for the solution:

R. Ext. ergot fl. (Squibb's), . . . } āā fl. ʒ ij;
 Aquæ destillat., }
 Glycerinæ, fl. ʒ jss. M.

S.—Fifteen to twenty or thirty minims each day to be injected subcutaneously in the hypogastrium.

February 17th Dr. Cushman wrote me as follows: "The hypodermic injections were commenced on October 13th, using fifteen minims each day for twenty days. The remedy being well tolerated I soon increased the quantity to thirty minims, and most of the time after the first three weeks the injection has been made twice a week; oftener, however, if the menorrhagia returned. When the treatment was commenced she had a great deal of pain and uneasiness in the lower extremities. These symptoms have entirely disappeared. Her abdominal circumference is now thirty-four

* Confirmatory of this view is the following from Dr. Barnes's recently-published work on diseases of women: "I am informed by Mr. Cockburn, an eminent surgeon practicing in India, that in that country quinine is specially apt to cause abortion in women of delicate fiber. Dr. Fordyce Barker has given satisfactory evidence of its power as an oxytocic."

† *Des Reductions de L'Inversion Uterine consecutive a la Delivrance.* By Dr. Ch. Fr. Weiss. Paris, 1873.

inches. Her general health has greatly improved. The tumor can not now be felt above the pelvic brim, and she thinks it entirely removed." I need not add a word to the testimony of Dr. Cushman—whose efficient attentions in this case have had so much to do with the fortunate result—as to the thus demonstrated value of ergot hypodermically in uterine fibroid.

CASE V.—Mrs. N. has been married about fifteen years, and for nearly that length of time has been suffering from at least two uterine fibroids; for nearly that length of time has been trying to get rid of them by various medical treatment. Last summer the annoyance and distress from the uterine enlargement were so great, the metrorrhagia—alternating with copious leucorrhœa—was so frequent and profuse, that she determined to be again treated. I used ergot hypodermically, the strength of the solution being as given in the previous formula, the quantity never more than twenty minims, and the injections made not averaging more than once in two days. In six weeks the abdominal circumference was lessened from forty inches to thirty-four, the leucorrhœa materially diminished, and the metrorrhagia entirely arrested, menstruation becoming normal. She was so greatly relieved that she did not care to continue the injections, for at each place of insertion a small abscess was almost sure to occur. Nevertheless she was not cured, and a future resort to the remedy with a much longer continuance will be absolutely necessary.

Remarks.—We might add to these cases two others occurring in our practice last year, in which hypodermic ergot was used, and in which the results were quite as satisfactory as in these.

To Prof. Hildebrandt,* of Königsburg, the profession is indebted for this most important application of ergot. "In a series of nine cases of intra-uterine tumor he made use of ergotine subcutaneously injected, and in a short time the troublesome symptoms subsided, and after long-continued treatment the tumors themselves decreased. In four the diminution was free from any doubt, and in one the tumor completely disappeared."

In the admirable "Address in Obstetrics" at the last meeting of the Pennsylvania State Medical Society its author,

* British and Foreign Medico-Chirurgical Review, January, 1873.

Dr. Goodell, alludes to several cases where favorable results have followed this treatment.

Recognizing the great value of this mode of treating uterine fibroids, in what form shall the ergot be used? Prof. Hildebrandt used a solution containing three parts of ergotine and seven and five tenths parts each of glycerine and water. In this country ergotine has not occupied any prominent place in therapeutic use, and most of those who have used hypodermic injections of ergot seem to have selected the fluid extract. All, however, so far as we have observed, use glycerine. Is this vehicle objectionable? I am indebted to my friend, Dr. T. J. Bowls, of Knightstown, Ind., not only for the suggestion but for the demonstration that the glycerine is a needless and may be an injurious addition; for in the case of a patient with a uterine fibroid who consulted me several weeks ago, and who since the 31st of January has been having ergot used subcutaneously—the solution I directed consisting of equal parts of the fluid extract, glycerine, and water—by the doctor, he found the injection invariably followed by painful inflammation and threatening abscesses. Dr. Bowls, after using the solution mentioned several times, omitted the glycerine, and states that nothing but a slight blush of redness follows the use of the new solution; this blush disappearing in a few hours, and there being comparatively no soreness. This observation of the doctor's is certainly of great value, especially as the elimination of the glycerine in no way lessens the efficiency of the remedy, as the satisfactory progress of the case under treatment by him proves.*

*The case under Dr. Bowls's treatment is another illustration of the value of ergot in uterine fibroids. He writes me, February 16th, as follows in reference to the diminution of the tumor: "On the crest of each ilium I made an indelible *macula*, and have carefully taken the measure each morning from one to the other over the center of the tumor." I shall not give the successive measurements which Dr. B. sends me—merely the two extremes; that is, the first and the last. On the 31st of January the distance between the points mentioned was fourteen and a half inches; on the 16th of February twelve inches.

If indeed the subcutaneous injection of ergot will relieve half the unfortunate victims of fibroid tumors of the uterus—we believe the proportion will prove still greater—actually curing many of these, the discovery of Professor Hildebrandt surpasses any other new therapeutic application of the last five years, and is one of the most important ever made.

The question might arise whether this treatment could not be of avail in some doubtful cases of abdominal tumor, where the difficulty lies in deciding as to whether the morbid growth is uterine or ovarian? *Cura ostendit morbum* is a maxim oftentimes of great value. But unfortunately in just those uterine tumors—fibro-cystic—which are most likely to be mistaken for ovarian cysts the agent would fail in producing good. Most probably it is only in mural and sub-mucous fibroids that ergot hypodermically can be of any benefit; and thus not only fibro-cysts would be left out, but also subperitoneal fibroids, as well as general fibrous enlargements of the uterus; though upon this last point our mind is by no means satisfied, for probably the atrophy of fibrous tumors under ergot is owing not exclusively to the excitement of the muscular contractility of the uterus, thus cutting off blood-supply indirectly, but also to an immediate action upon the blood-vessels themselves, thus directly diminishing blood-supply.

Nevertheless there may be some germ of truth in the suggestion in regard to the possible utility of these injections for diagnostic purposes; as, for example, in determining, should other means fail, between certain different varieties of uterine tumor.

NOTE.—Since writing the above I have received a copy of the *Medical and Pharmaceutical Notes*, by Dr. Squibb, republished from the *Proceedings of the American Pharmaceutical Association* for 1873; one of these notes being devoted to *ergot and its preparations*. Dr. S. believes there is no such thing as ergotine, and that the various substances so called only represent the activity of the

drug, as they represent more or less perfectly its entire composition. Dr. S. advises for hypodermic use a watery solution of the solid extract, obtained by evaporating the officinal fluid extract.

INDIANAPOLIS, IND.

HALLUCINATION.

BY W. J. ELSTUN, M. D.

Assistant Physician in the Indiana Hospital for the Insane.

“Is this a dagger which I see before me,
The handle toward my hand? Come, let me clutch thee :
I have thee not, and yet I see thee still.
Art thou not, fatal vision, sensible
To feeling as to sight; or art thou but
A dagger of the mind, a false creation,
Proceeding from the heat-oppressed brain?
I see thee yet in form as palpable
As this which now I draw.”

Hallucination is not readily definable, although many of its prominent characteristics are sufficiently easy of comprehension to place some knowledge of it within easy grasp of the generally well-informed. The especial difficulty in the way lies in distinguishing true hallucination, or that form of hallucination which is a feature of insanity, from accidental, induced, temporary, or what is called false hallucination. The following is the definition of the term given by one of the highest authorities: “By hallucinations we understand subjective sensorial images, which, however, are projected outward, and thereby become apparently objects and realities. . . . It is a hallucination when I see human forms while in reality no man is near, or hear a voice which has not spoken.” *

* Griesinger's Mental Pathology, p. 84.

"Hallucinations are false perceptions of the senses—the eye, the ear, the nose, and so on. The hallucinated patient thinks that he sees in the blackest darkness or hears a voice through any number of thick walls, whereas his seeing or hearing is entirely subjective, taking place altogether within his own head, without any excitation conveyed to his organs from the outer world." *

Other features of insanity, represented by perverted sensorial impressions, bear a close relation to the preceding.

Illusion, while nearly related to hallucination, is the transformation of something seen, heard, etc., into some other form, person, object, sound, or voice. The commonest furniture of the patient's room may to his sight be converted into animals, monsters, angels, etc. Friends cease to be known or recognized, and strangers are made to take their place. Hearing and the other senses are alike perverted. Illusion may then be stated to be the eccentric effect of an external object operating upon a disordered sensorium, which disordered sensorium evolves a perverted impression, which in its turn is recognized by the conscious mind as though it were a legitimate result of the ordinary function of the sensorium. Hence it comes the mind is unable to distinguish its own error. The effect of hallucination upon the conscious mind is the same, the difference being that the disordered sensorium creates instead of transmits a perverted impression.

Delusion also partakes of some of the features of both hallucination and illusion, being in fact often intimately complicated with one or both. Delusion is a false perception, and operates more directly through the reasoning faculties to pervert the judgment, and consists in a fixed erroneous perception or idea, which, as in hallucination and illusion, the mind is incapable of correcting either through its own reasoning or the reasoning of others.

Hallucination alone is not necessarily a proof of insanity,

* Insanity, etc., by Blanford, p. 153.

being producible by narcotics, etc., as opium, belladonna, hash-eesh, etc.; but there must be other evidence of insanity. Like many other features in the diagnosis of insanity, hallucination is to be considered in its relations to the general condition of the brain and mind. The influence of narcotics or other direct cause being excluded, are the hallucinations to be accounted for in any other manner? Is there acute disease, delirium, or other temporary cause? Do the hallucinations return and influence the mind after they have already been recognized in their absence as imaginations? Persistence or continued recurrence of hallucinations must furnish decided evidence of insanity, and it is presumable that many cases are real insanity which subside in a short time and are not so considered, while a case exactly similar up to the period when recovery takes place in the first progresses or is protracted and developed into a pronounced case of insanity, dating back to the beginning of hallucinations similar to those of the case in which the disease was arrested.

The causes of insane hallucinations are various, and may be said in general terms to be any thing which exhausts for a prolonged time the brain as a general organ. A large number of cases arise from emotional conditions, which, being prolonged, exhaust the brain and impair its functions. Protracted loss of sleep, whether voluntary or due to emotional or physical complications, is a common cause. Peripheral irritation by its reflex influence upon the brain is supposed sometimes to be capable of developing hallucinations.

The attempt to locate the exact point in the brain where the disturbance of function which produces the hallucination exists is as vain as is the endeavor to determine the precise spot in the organ where any given ideas may originate. It has been modestly expressed thus: "The seat of hallucinations of sight must be the internal expansion of the optic nerves. Anatomical observations have yet to be made on this point. In dissections the thalamal surfaces, the corpora

quadrigemina and their neighborhood, also the centrum ovale, should be carefully examined."* As to the seat of hallucinations of the other senses science is even more indefinite than it is in regard to that of sight.

Authors claim that hallucinations of sight occur more frequently in acute than in chronic insanity, and hallucinations of hearing more frequently in chronic insanity;† also that hallucinations of hearing are generally indicative of a more serious and less curable affection of the brain.‡

Five years' observation of insanity, embracing over three hundred acute cases annually, has not confirmed these statements. I have not observed that hallucinations of sight are more frequent than those of hearing. On the contrary, as far as I have seen, hallucinations of hearing predominate in all cases, whether acute or chronic. Neither does hallucination of hearing, when alone or predominant, indicate a more serious or less curable form of insanity. The other statement, however, that hallucinations of hearing predominate in chronic insanity, I believe to be correct. My own estimate of the proportion of hallucinations of hearing to sight in acute cases is at least as two to one, and in chronic cases probably five to one. Almost all acute cases with hallucinations present both those of sight and hearing, while hallucinations of the other senses occur in but a limited number of instances. But few cases are admitted in which hallucination is not associated with more or less general disturbance of the mind.

As in almost all forms of disease, hallucination is decidedly paroxysmal, and I do not find that books lay sufficient stress on this feature. Cases in which hallucination is the prevailing manifestation usually have intervals of freedom from mental disturbance, when the patient will converse rationally and calmly until a return of the paroxysm, showing that there

* Griesinger's Mental Pathology, p. 98.

† Blanford, p. 171.

‡ Griesinger's Mental Pathology, p. 98.

is no general impairment of the faculties, but a sensitiveness in a certain direction which by some unaccountable influence is at times brought into activity and again allowed to relax into composure.

Shakespeare, who seems to have possessed all knowledge, including that of medicine, must have been familiar with this form and phase of mental phenomenon when he puts into the mind of a murderous king these vivid recurrences of horrid hallucination:

“Hence, horrible shadow!
Unreal mockery, hence! Why, so; being gone,
I am a man again. Pray you, sit still.”

Mr. —, whose excessive devotion to business had produced watchfulness, took chloral at will to induce sleep. His mind at length became much obscured, and he had symptoms of general paresis. In a week after admission consciousness began to return at intervals, but he still had paroxysms of violent excitement, in which he tried to get away from something which he saw and heard. After one of the most violent of these he described the sensation as similar to nightmare, in which he thought he was in a cellar with the building falling upon him, and at the same time saw and heard the entire body of the legislature of Indiana rushing upon him.

Another patient fancied he saw great numbers of flying angels, who were often changed into beautiful but always white birds. During these hallucinations the patient would look steadily upward at an angle of about forty-five degrees, and consequently saw nothing but the plain white ceiling. This patient heard the screams of his wife and children being murdered; heard and saw men preparing to take his own life and that of his friends. He heard voices calling him, and would go hurriedly to the place where he heard the voices. If detained, he would not give attention to those around him, but listened to the distant voices, answering that he would come soon. He had also delusions, one of which was that

his bowels had been cut with a large knife, and he would go about holding his hand on the part he supposed to be cut. During the severity of these paroxysms he was very nervous and usually in profuse perspiration, exhibiting extreme mental and physical agitation. During partially lucid intervals he would talk sensibly of most things, but declined to converse respecting his paroxysms of hallucination.

Mrs. —, who was naturally vivacious, but emotional, had suffered for two years from acute physical disease, which not yielding to treatment had caused her much distress from thinking she could not be cured, but must suffer indefinitely and die. This emotional disturbance, and probably some reflex influence upon the brain from her local disease, caused insanity, mainly indicated in hallucinations, which affected all the senses. She had a sensation of fire burning over the entire surface of her body, and appeared to suffer intensely. From her windows she saw, smelt, and tasted herds of filthy swine. A black cow was her special apparition. This cow would come into her room, and in the midst of her efforts to drive it out she would be suddenly herself converted into the identical black cow. She would now exhibit great uneasiness and disgust, but not violence. When she became herself again the cow was gone, but she smelt on her own breath the breath of the cow and tasted in her mouth the taste belonging to the cow. She would now expectorate violently and with the utmost disgust. She had nearly lucid intervals, in which she recognized these hallucinations, but said she could not free herself from them. She had a delusion that she would live but a short time, usually expressed as "not until to-morrow morning." She recovered from every thing but this latter delusion, and left the asylum in good spirits, saying "it did not seem to her she would live to get home after all."

CLIMATE IN PULMONARY CONSUMPTION, AND
CALIFORNIA AS A HEALTH-RESORT.*

BY LEWIS ROGERS, M. D.

A brief visit to California in November and December, 1873, enabled me to make some observations and inquiries in regard to that wonderful state as a health-resort for pulmonary invalids. Much has been reported and written upon this subject in the last few years by both professional and non-professional persons, and the attention of pulmonary invalids has been strongly and hopefully directed to that interesting portion of our country. I desired to see and judge for myself as far as this could be done in a brief visit. This desire was intensified by some of the incidents of the trip. The various trains from the north, east, and south converge at Omaha, and one consolidated train is daily made up containing the passengers going west. The train upon which I traveled was a long one, consisting mainly of sleeping-coaches filled with through passengers, many of whom were in quest of health. An association of a day or two brought me into contact with sufferers from pulmonary consumption in its various forms. Among these were some in the very last stages of the disease. One was a refined and cultivated lady from Boston, the wife of a physician, who had been taken from her bed upon the preceding cold Sunday night and placed in a sleeping-section, from which she was only removed when compelled by change of cars. One change was made at Chicago, a second at Omaha. I saw her in her berth, after leaving Omaha, suffering from cough, dyspnoea, pleuritis, loss of appetite, and all the discomforts incident to confinement in a crowded apartment, in which there could be neither quiet nor privacy. I have rarely seen a greater

* Read before the Kentucky State Medical Society, April, 1874.

sufferer. At Ogden the Union Pacific Road terminates and the Central Pacific begins. Here she was compelled to change again. We reached this point at 6 P. M., and were detained two hours. For a portion of this time this exhausted woman was placed in a cold and cheerless reception-room until her sleeping-section could be secured. When we reached Stockton, on Sunday afternoon, she was utterly worn out and could go no further, having crossed the continent in six days. Another patient was a gentleman, from one of the eastern cities, emaciated and hectic, with lungs disorganized by tubercular softening. He was unable to complete the journey, and was left at Ogden or some other equally inhospitable and desolate place. A few days before, the celebrated pugilist, Heenan, had died on the train, somewhere between Denver and San Francisco, from pulmonary hemorrhage.

My experience during this trip was doubtless the expression of that which occurs on every train. Such cases as these are well calculated to excite serious and thoughtful inquiry as to what California promises in the cure of pulmonary consumption to those who incur such hazards and make such sacrifices to reach it. This is an inquiry which may be raised not only in regard to California, but every other place of note in this relation. There is a strong popular as well as professional faith in change of climate in the treatment of pulmonary consumption. Is this faith founded in fact? Do those invalids who formally travel from place to place in search of some healing climate more certainly get well or more surely prolong their lives than those who remain at home? Is the sum of human health and happiness increased or diminished by change of climate, considering in such an estimate the several elements of permanent cure, prolongation of life, separation from home, from old friends and associations, the hazards and vexations of travel, the countless anxieties and fears, the pecuniary sacrifices often very great? Is the good done by change of climate so great, so certain, as to entitle it

to the prominent place which it holds as a remedial agent? Let every physician of sufficient observation appeal to his experience carefully and answer these questions.

I have seen much of pulmonary consumption, and have no hesitation in expressing the opinion that in many cases the disease is entirely arrested, and in many others a fatal termination postponed for years. I am equally confident that these fortunate results have been as often obtained in cases which have not enjoyed the influences of a formal change of climate as in those who have had such a questionable privilege. Facts will warrant me in going even further, and in stating that I have observed more recoveries among those who did not change their place of residence than in those who did. This opinion is seemingly opposed to most of the authorities on the subject of change of climate in the treatment of pulmonary consumption, but it is not really so when the true meaning and intent of the best authorities are accurately interpreted. I believe that judicious travel and a climate selected with a careful adaptation to each individual case may be productive of infinite good, just as injudicious travel and the selection of a climate not properly adjusted to the requirements of the case may do infinite harm. Just here the great difficulty lies. Travel and climate are powerful therapeutic agents, and require care and precision in their administration, as other powerful agents do. Cod-liver oil is beneficial, eminently so in many cases, but in others it disagrees to such an extent as to prove hurtful. Alcohol as a remedy for consumption affords a still stronger illustration of the point which I seek to enforce. Its indiscriminate and copious administration in all cases, as if it were endowed with some specific properties antidotal to consumption—and this has been and is still the practice with many—is calculated to inflict and has inflicted great harm. Given judiciously, it is a remedy often of precious value; and so of arsenic, iron, the hypophosphites, and the entire list of remedies which

have found a place in the therapy of this disease. A thorough knowledge of the requirements of each case, and a wise adaptation of travel and climate to these requirements, are the means by which good results may with some certainty be secured.

This is the doctrine theoretically taught by the authorities, and it is the true doctrine; but practically it is not enforced, and hence the unfortunate failures in many—in much the larger proportion indeed—of the unhappy subjects of climatic changes.

Fashion has its influence in medicine as in all the affairs of life. Remedies are in vogue for a time, and are lauded for their wonderful curative powers, and then sink into unmerited disrepute possibly, or pass wholly out of notice. So has it been in regard to various noted places in their climatic relations to pulmonary consumption. A few years ago Madeira was the favorite resort in Europe, then Nice, and now Mentone. In this country Florida long held the leading position, paling for a time before Minnesota, and now again re-asserting its claims to superior consideration. For a few years a large proportion of invalids of this class sought Minnesota, but at the present time this state does not maintain the curative celebrity which it enjoyed. At the present time Colorado and California are attracting a large share of attention, and thousands of invalids have gone thither with hopes even more sanguine than animated the pilgrims to the other resorts alluded to. Sufficient time has not elapsed to determine how far their hopes will be realized, how far the glowing accounts of the beneficial influences of these climates will stand the test of direct and extended trial. I do not doubt what the result will be. The history of all other climates will be repeated in these, for the reasons which I have endeavored to set forth. There is no climate in the world, and there can not be, which possesses specific powers in the cure of pulmonary consumption. Here the great error

exists. All the climates mentioned possess virtues which are adapted to some conditions and some cases, and are equally hurtful to others. The former improve, have life prolonged, or get well, and are heralded all over the world; the latter perish and are forgotten. The few who are so fortunate as to recover give unmerited repute to the climate; the many who die do not tell their story.

Consumption can not be successfully treated in the Procrustean bed of any one climate. The indiscriminate resort of patients in the various stages of the several forms of the disease to the same climate must necessarily lead to failure in a very large proportion of the cases. This irrational course affords an explanation of what I have ventured to express as my own experience, that more pulmonary invalids recover who stay at home and are properly cared for than when they subject themselves to the uncertain and unknown chances of change of climate. In a vast proportion of instances unknown conditions of disease are subjected to unknown conditions of climate.

Let us consider a few of the elements of the problem to be solved when the question of climate is raised in regard to a case of pulmonary consumption. We shall see that it is a most complex question. In the first place, the precise nature of the case must be known. We must determine to which of the several varieties of the disease it belongs; whether it is the result of an inherited diathesis, which surely sooner or later discloses itself in the form of a disorganizing disease, even under the most favorable circumstances, and without any apparent exciting cause immediately provoking its development. These diathetic cases are common, the organism being innately endowed with a vitality sufficient only for a limited number of years. Or whether it belongs to that class of cases which has its origin in inflammatory processes—bronchitis or pneumonia, or broncho-pneumonia—which recent pathologists assign as frequent causes of con-

sumption without any hereditary predisposition. Or, again, whether the result of special modes of life and occupation, or the septic influences incident to a residence in a crowded city or badly-ventilated and foul habitations. These factors must enter into the solution of the question of climate. The special condition of the case at the time must be carefully considered. The stage of the disease, the extent to which the lungs have been disorganized, the condition of the digestive organs, the constitutional symptoms, all these and many other important details must be estimated in the decision of the question. The special susceptibilities of the case must be known; whether a cold or a warm, a moist or a dry, a stimulating or a relaxing climate is most likely to agree. These are points which should, if possible, be predetermined, but which often are not or can not be until actual experiment is made, probably too late to rectify any error of selection.

Assuming that a thorough knowledge of all these essential matters has been secured, the qualities of climate adapted to the special requirements must be known to exist in the place which may be selected. In regard to most of the health-resorts of pulmonary invalids, both in this country and in other parts of the world, we are supplied with much reliable information. We have hygrometrical and thermometrical tables for each day and week and month of the year, the diurnal variations, the electrical conditions, the prevalent winds, the geological and other telluric features. Without entering into further details of this kind, we have such data as would seem sufficient to enable a physician to select a climate adapted to the case in hand; and this is sometimes done, and the result is most fortunate. Such instances are exceptional, however. My own experience tells me that a large proportion of pulmonary patients who seek health in distant climates fail to find the adaptation so essential, and are sadly disappointed in securing the anticipated benefits.

If this be so when a climate is selected by the aid of all the light that can be shed upon the selection, how much more certain must be the disappointment, and how much more disastrous the failure, when patients rush indiscriminately to such places as may be the fashion for the time, under the guidance of inadequate evidence and false statements? It is a suggestive fact, indicating strongly the uncertainty of the adaptation of the means to the end, that patients rarely realize their expectations in regard to the benefits of climate. The place to which they go, though chosen with never so much care, rarely fails to be deficient in some essential conditions. It does not prove what it has been represented to be; the season often happens to be exceptionally bad; weather such as was never known before is encountered; and this is the experience of a large proportion of cases year after year. The truth is that no climate is invariable. Every year there are fluctuations, and the future can not be accurately predicated upon the past. I have sent patients to Florida, to Minnesota, and other health-resorts abroad, and with few exceptions the result has not been favorable. They have returned with the report that the season or the year was an exceptionally bad one, or that they had gone too late for the beneficial influences of the climate, or that they had been damaged by improper and badly-prepared food and the want of the comforts connected with home.

A due estimate of these latter causes of failure must be made when sick people are sent to strange places. However well adapted a climate may be in itself, it will fail to do good unless the food be just what it should be, in quality and quantity, and this is very seldom the fact. The sick can rarely get what they need in hotels and boarding-houses, or that kind of food essential to their proper nutrition. They who have ample pecuniary means can not do so, while the larger class, who are compelled to exercise economy, often suffer very seriously in this regard. If sick people be com-

pelled to deprive themselves of many things essential to their comfort because of their cost, the good effects of climate and travel will be more than neutralized. No invalid should ever travel unless prepared to spend money without the harassing sense that he is not able to afford the large outlay necessary to his comfort. I am now taking a practical view of the matter, for I have known the depressing and damaging influence of this kind of thing upon many people.

There are other topics of a kindred character which may be adverted to here as modifying and sometimes counter-acting the good effects of climate, and which should be estimated in sending invalids to distant regions. There are many people so constituted that they are miserable when long absent from home. Homesickness will more than neutralize the good effects of a climate perfect in its adaptation.

Again, in health-resorts of much repute the society must consist largely of invalids suffering with pulmonary disease. It is not possible to say how far the atmosphere of a place crowded with consumptives may be contaminated by morbid effluvia, but it is altogether probable that such contamination does exist to some degree, and that it must prove more or less reciprocally hurtful. It can not be doubted, however, that the moral influence of such association must be damaging. Despite the hopeful view that consumptives generally take of their condition, they can not fail to feel more or less acutely the death of those with whom they may have been associated, or to indulge in depressing sympathy with such as may seem to be incurable.

The scope of this paper indicates in very clear terms my opinion that the formal migration of pulmonary invalids to the various distant health-resorts which acquire or have acquired celebrity has not been productive to them of benefit as a constant or even frequent result. I have given reasons why this was not likely to be the effect, even when the places were selected with careful regard to climatic adaptation, and

less so when such migration was a mere haphazard venture. This opinion is not inconsistent with a very great confidence in what I have called judicious travel. In the treatment of all chronic diseases, in many functional and even organic affections which have not gone to the extent of structural disorganization incompatible with life, and especially in the treatment of pulmonary consumption in its first and sometimes in its later stages, we have no remedial agencies comparable with judicious travel; such travel involving, in its manifold power, change of climate, of scenery, of food and water; of mental, moral, and physical states; of all the forces which influence organic nutrition. Such travel may be desultory and various, varied to suit the exigencies of each individual case, long or short, to near or more remote points, to warm or cold, to high or low regions, to the country or to cities, as taste, inclination, money, or special requirements may dictate. Patients may travel in this way and return home from time to time, and derive more surely all the beneficial influences possible in their cases without any of the damaging effects of homesickness, monotony, bad food, incompatible climate, long banishment to a distant and strange land, without suffering what Holden so happily denominates "ostracism for consumption."

The opinions which I have long entertained, and have endeavored in an imperfect way to indicate in this paper, were not modified by my observations and inquiries during my recent brief visit to California. With a special purpose of great interest to me, I consulted a number of the most intelligent physicians of San Francisco in regard to most of the parts of California which have been spoken of as eminently useful in their influence upon pulmonary consumption. My inquiries were more particularly directed to San Diego, Santa Barbara, San Bernardino, Los Angeles, and San José. Southern California, as we know, has acquired very great repute in the last few years, and has been spoken of as

destined to become the great sanitarium for this and many other forms of pulmonary disease. It is to this portion of the state that thousands of people are now going for the restoration of their health, either as temporary sojourners or permanent residents. All of the towns mentioned are thronged with people of this kind, particularly in the winter season. To my surprise, I did not find a single resident physician at all*enthusiastic in his praises of Southern California. They all expressed the rational view of the subject which I have expressed. I asked them if they were in the habit of sending their patients to Southern California, and they replied that they did so occasionally and for a brief period of the winter, but that they preferred for most of their cases the high and cool resorts of the Sierra Nevada Mountains. This preference is expressed by Dr. F. W. Hatch, as the result of observation and statistical deduction, in his two able reports upon the Climatology and Diseases of California to the American Medical Association. These physicians, however, claimed for California what probably exists nowhere else—the possession of every variety of climate which has been found useful in the various forms and stages of consumption, a variety which admits of a ready and very perfect adaptation to individual peculiarities and requirements. A very few hours of travel will place a patient in whatever climate he may desire; warm or cold, dry or moist, on the mountains or the plains, inland or on the sea-shore, in sheltered valleys or breezy uplands. This variety and facility of adaptedness exists nowhere else in this country. In Florida every kind of warm climate may be found suitable to that class of patients who require warmth; but there are no mountain-ranges, no elevated regions in which the influences of a low temperature and a diminished atmospheric pressure can be enjoyed, conditions of climate now deemed so valuable in a large class of consumptive invalids. In Minnesota we find the cool, dry, bracing air of a moderately elevated country,

with the absence of the warm, equable temperature so necessary to a large class of invalids. In Colorado we have cool, dry, invigorating air, with a low barometric pressure, without the equable warmth so congenial to many delicate constitutions. In California all of the best qualities of these several resorts can be readily found, while those which are likely to prove hurtful, after a brief trial, can be avoided.

San Diego is distinguished for its warm and remarkably equable temperature, the diurnal variations being very slight, and the changes due to the seasons so inconsiderable as to be harmless. Its proximity to the sea renders the air salt and somewhat humid, unless the wind blow from inland, and in the winter season cold fogs are sometimes troublesome for a portion of the day. Many of the physicians of San Francisco prefer San Diego to any other place as a winter residence for a certain class of patients. From what I could learn, it is deficient in variety and abundance of the best kinds of food. The general supply of some of the most essential articles is brought from a distance.

Santa Barbara enjoys a like equable temperature, somewhat colder than that of San Diego, with a salt and somewhat humid air, and occasional but less frequent and warmer fogs. The weather is sometimes too warm and relaxing for some consumptives, patients "deliquescing," as I heard a physician remark in regard to the effect of that climate upon a distinguished member of the medical profession from New York.

San Bernardino enjoys a temperature very similar to that of San Diego and Santa Barbara, but being more remote from the coast its air is more dry, free from sea impregnation, and fogs do not so frequently occur. Stockton and Visalia are inland towns, with a mild, dry, and equable air, and very agreeable to many invalids to whom sea-air is offensive.

San Francisco is generally conceded to be injurious to pulmonary invalids, though the months of April, May, and

June are unexceptionable in most of the qualities of a delightful climate.

My observations and inquiries about San José and its vicinity, and particularly the warm belt of the foot-hills, led me to think most favorably of them as a place of temporary or permanent residence for many pulmonary invalids. Apart from its qualities of climate, San José is a lovely city, in a valley of unsurpassed beauty and fertility, with the mountain-scenery of the coast-range on either hand, good society, and all the refinements and luxuries of life.

Sufficient time has not elapsed to determine what influence the varied climates of California may have upon the permanent residents of the state, upon the inhabitants born and reared there, in the prevention or production of pulmonary consumption. No fair inference can be drawn from mortuary statistics, for the constant influx and death of consumptives from other parts of the world must vitiate any present deductions from such statistics. Even if the line could be accurately drawn between cases produced in California and those imported, hereditary predisposition or taint may fairly be supposed to extend its influence through several generations, and be legitimately held to modify or oppose effects strictly due to climate. Many of the present citizens of the state are the progeny of consumptive ancestors, who settled there in search of health. Even if California should be found not more exempt from phthisis than other places, or absolutely more productive of it, this could not be held as valid proof of its unfitness for strangers seeking it as a health-resort; for, as Dr. Walshe pertinently remarks, the apothegm "*pessimum ægro cælum est, quod ægrum fecit*" can not be accepted unconditionally. "Probably the earth offers no more favorable spot to the tuberculized British patient than Nubia, yet the native Nubians are extensively destroyed by phthisis. Again, the climates of Australia almost invariably prove serviceable to delicate Europeans, natives of northern latitudes; yet

pectoral disease is far from being unknown among the natives of Australia of British stock." These facts conclusively disprove the prevalent popular idea of specific virtues for consumptives in any climate.

In times which now seem old, so vast have been the strides of modern enterprise, but which really are within the limits of a half decade, "a trip across the plains" was accounted one of the most efficacious of the means for the prevention and cure of consumption. Such a trip doubtless proved beneficial often, but not infallible. While many were improved, many perished by the wayside. This trip, which once consumed six months, and derived its usefulness in part from the toil, exposure, wild adventure, and danger incident to it, can now be made in six days with ease, comfort, and safety. It yet presents, however, strong claims to consideration as a remedial agent. The travel from Omaha to the Golden Gate is as delightful as travel can be. The road is under almost military discipline, the cars capacious, comfortable, and elegant, the officials polite, the eating-saloons superior to those on many of the eastern roads, and the companions of the voyage often very interesting. The novelty and variety of incidents and scenery produce and sustain a constant state of mental exhilaration and dispel all sense of fatigue, and the traveler reaches San Francisco, refreshed and invigorated, after an unbroken journey of more than two thousand miles. If an invalid choose to do so, he can pause for a time at Cheyenne, Laramie, or some other place of interest, or make most agreeable and instructive detours to Denver, Salt-Lake City, Nevada City, the mines, or the lakes and mountains on either hand. Apart from all climatic change, such a trip as this, judiciously made, can not fail to be productive of most salutary results.

LOUISVILLE.

A CASE OF ANAL FISTULA PRESENTING SOME
UNUSUAL PECULIARITIES.BY ELY M'CLELLAN, M. D.,
Assistant Surgeon U. S. A.

January 3, 1874, I was invited to examine Mr. A. S., aged twenty-seven years, living near Lebanon, Ky., who had been suffering from a fistula in ano for some six years.

The person of the patient having been exposed in position for examination, my attention was arrested by an umbilicated depression directly above the sulcus of the nates. The surface around this depression presented no appearances differing from that of the surrounding skin, and the patient, in reply to my inquiry, informed me that it had existed all his life. Upon the left nates, about an inch and a half below the anus, two fistulous openings were discovered, into the lower of which a probe was passed and without difficulty pressed to a considerable depth. A second probe passed through the second opening impinged at once upon the first instrument.

A careful examination of the rectum failed to determine any communication with the intestine. The exploration of the fistulous tract was pushed, when the point of the exploring probe emerged from the depression above the sulcus.

January 17th, assisted by Drs. W. W. Cleaver and W. E. Mattingly, of Lebanon, a grooved director was introduced within the lower fistulous opening, and was with some little effort carried nearly to the umbilicated depression before noted, when its progress was arrested and the point could not be protruded. The tissues were divided to the point of the director, when the resistance which had been experienced was discovered to arise from a wad of hairs, which effectually blocked the advance of the instrument. They being removed,

the director was easily passed through the remainder of the tract, and the operation was complete.

A close examination of the exposed surface disclosed a sharp splinter of wood, one and a quarter inches in length, lying in the tract of the fistula. The wad of matted hairs removed from the tract weighed several grains.

The causation of this fistula is evident. The umbilicated depression, which has been described, was congenital. The body of this gentleman was most bountifully supplied with hair. Of these hairs, shed from time to time, a number collected in the depression, in which at some time and in some way unknown to the patient a splinter of wood was also inserted, and the fistulous tract was commenced.

A point of some interest is to be found in the fact that the father of this gentleman died after having suffered for some years with a fistula in ano. The subject of this paper (the second generation) was born with the pouch as described; and in the third generation, in the person of a child of Mr. S. two years of age, a pouch similar to that on the person of the father is congenital. On the person of this child a probe is now readily passed to a depth of a quarter of an inch.

LEBANON, KY.

UTERINE FIBROIDS.

BY DRS. SHACKELFORD AND HOPPEL.

N. R., a negress, aged about fifty years, was in as good health as usual on the evening of the 26th of January, and retired to bed a little wearied by a day of hard work at the wash-tub. She slept well, and was alive at four o'clock A. M. on the 27th inst. When her husband awoke, an hour or two later, she was dead. We were then requested by the coroner

to make an examination for the purpose of ascertaining the cause of her death. Assisted by Dr. Caldwell, of this place, we proceeded to work.

The body was well nourished. Rigor mortis was strongly marked, though the extremities were quite warm. The abdomen was distended as if she were advanced in pregnancy seven months; slightly tympanitic. The thoracic cavity was opened first for the purpose of examining the heart, as we surmised that the sudden death was to be there explained. In removing the heart the pericardium was ruptured, and about two ounces of fluid escaped into the cavity. The organ was almost double the usual size, being both hypertrophied and dilated, the latter being in excess of the former. The semilunar valves of the aorta showed a few vegetations. The muscular structure was softened, tearing readily under a small force. There was neither obesity nor fatty degeneration. The lungs were sound, so far as examined, though greatly pressed upon by the diaphragm, which was forced upward by the contents of the abdomen. Extending then our incision into the abdominal cavity, we found all of the intestines distended with gas. The whole venous system of the cavity was in a varicose condition, many of the vessels being one eighth of an inch in diameter, and some of them even larger; and at their terminal extremities were many sacks containing a thin serous fluid, of which there was a small quantity in the cavity. There were no adhesions between the different parts of the intestinal canal, but the omentum was found adherent to a large tumor on the lower part of the abdomen, on the right of the median line.

The upper and anterior portion of this tumor gave evidence of the presence of fluid, which had several years before caused it to be mistaken for an ovarian one. The hand passed down beside it revealed a hard and dense neck, and, surrounding this and growing from it, it came in contact with firm, resisting nodules in every direction. The ovaries at that time

could not be found. The whole mass, including a portion of the vagina, was removed.

The uterine cavity measured about five inches in depth, and was extremely irregular; the os externum was patulous; the neck when laid open was full two inches in length; the os internum was perfectly normal. The incision was then carried through the fundus, exposing the internal surface of the uterus. To the anterior portion of it was attached, by a broad pedicle, a small mucous polypus, which probably accounted for what her friends supposed was her menstrual flow. The mucous membrane gave evidence of chronic endometritis. Numerous rounded masses of irregular shape projected into the cavity. They were slightly compressible. A closer examination of them showed them to be uterine fibroids. They occupied every conceivable relation to the uterus and pedicle. The one first noticed on opening the abdominal cavity was evidently subserous, having grown from the fundus, being attached by a long pedicle. This one, without its pedicle, weighed five pounds. When opened about six or eight ounces of straw-colored fluid escaped. It contained no albumen.

This tumor appeared to be composed of three distinct and almost equal portions—viz., the fluid already mentioned, a white fibrous or connective tissue, and a yellow elastic tissue—the latter two gradually merging into each other. Attached to the pedicle were many smaller tumors; some smooth, others nodulated. These were enveloped generally in a fibrous sheath, from which they could easily be enucleated. Some had short, small, round pedicles; others long, broad ones; and yet others none at all. The uterine walls were distorted in every possible way by numerous interstitial as well as by a few submucous tumors. Three or four of them were undergoing calcareous degeneration. In one the process of cretification had progressed to such an extent as to render the tumors incompressible by any ordinary force;

in the others the earthy salts had been deposited without any structural arrangement. In none of them could ossification be detected. The smallest tumors found weighed three grains. The rest, excluding the large one, were of all weights up to a pound. They numbered in all fifty-seven, being just twenty-two more than the largest number reported in the valuable work of Dr. Thomas. While removing the tumors, by diligent search on each side of the mass an ovary was found. The one on the left side was changed but little, atrophy having apparently just commenced. The remains of several Graafian vesicles, with their walls thickened and corrugated, were discovered. The right ovary was altered in size and shape from having been more compressed by the fibroids. The vagina was atrophied.

TRENTON, TENN.

Reviews.

Transactions of the Michigan State Medical Society. For the year 1873.

The first paper in this modest volume is the address by the president of the society, A. B. Palmer, M. D. The subject of the address is *Law and Intelligence in Nature, and the Improvement of the Race in accordance with Law*—almost too large a subject to be treated in so brief a space. Nevertheless, let us say that the address is scholarly, earnest, and philosophic, and well worthy its author.

Two reports on *Hygiene*—the one on its *laws with reference to the government of schools*, by Dr. Hitchcock; the other, *with reference to construction, ventilation, etc., of school-buildings*, by Dr. Kedzie—are valuable papers. Dr. Jenks reports a case of *coccyodynia*, in which he removed three bones of the coccyx; Dr. Bliss a most interesting case of *fracture of the ribs with dislocation of the spine* successfully treated; Dr. J. F. Noyes contributes a paper on *embolism of the central artery of the eye*, and Dr. Eugene Smith one on *aural catarrh*.

But the Michigan doctors did something more than this. First, we find in the Transactions a very well-written report upon the question, *Shall the medical profession or the medical schools control admission to the ranks of the profession?* This report advocates the former part of the proposition with arguments founded upon the general practice pursued in the method of admission in the two other learned professions, and upon the fact that diplomas from medical colleges may be dishonestly or otherwise unworthily obtained. The report

declares that "our remedy lies in the direction of organization—perfect organization of the profession. Societies everywhere, competent censors, rigid examination of all new candidates with or without diplomas, a higher grade of literary culture, and an unflinching loyalty to science." These are brave words indeed; and when it is declared that all candidates with or without diplomas should be examined the key-note of a real advance is struck. Nevertheless, no very decided hope of better things is awakened in our bosom. As long as doctors will take incompetent students into their offices, and send them to colleges because cheap, convenient as to location and easy as to graduation, there is no hope that these preceptors and their illiterate pupils will organize for the purpose of purifying the stream which annually issues upon the profession from the colleges. "Organize" indeed! It has been the cry for years, and to-day not one tenth of the doctors of the United States are active members of any medical society. We believe in medical societies where gentlemen can meet for the cultivation of professional knowledge and mutual improvement; but debating-clubs governed by cliques and coteries, wire-workers and tricksters, arenas for personal strife or professional declamation, we do not care for. Nay more, we have no great faith in medical societies as courts of justice or pieces of moral machinery to elevate the profession and enlighten the people in their duties and conduct. Nevertheless, we would be glad to see, however hopeless our desire, the very ends which this committee advocate in their report accomplished.

But our Michigan friends were not content with this report. They did something more, unanimously passing the following resolution: "Resolved, that a representative committee of five members of this society be appointed by the president to confer with the board of regents and the medical faculty in respect to the relations of the Medical Department of the University to the medical profession of the state, and in respect

to the future conduct of said department under any contingencies necessitating a change in its organization."

This committee went straightway to their work, and on the 24th of June made their assault upon the regents and faculty. They tell them that the medical profession has depreciated much more proportionately than the clerical or legal in popular estimation; also stating, while the *popular* average of intelligence and culture has advanced, the *professional* has remained stationary, if it has not retrograded.

Again we have adduced as one of the reasons for the relatively greater depreciation of the medical profession in popular esteem the fact that as a profession it exercises no visible control over admission to its ranks. Another cause is found in the unseemly quarrels, "undignified disputes, of school with school and of doctor with doctor." And here let us say that these quarrels, these disputes, are a curse to the profession itself, as well as an injury to it in public esteem. Real learning is not proud, boastful, and pugnacious; it is humble, any thing but puffed up; it is charitable and tolerant. Truth is not a sword to cut and hew down all opponents, to rush upon hostile ranks with the shout of battle and exterminate them. It is a light gradually illuminating the darkness, gently dispelling it; working silently as the sunlight, but like it working with invincible power, like it accomplishing the grandest results.

But returning, the committee assert this as their thesis: "*that adequate medical knowledge, made accessible to all, shall be required of all, of whatever school, who attempt to practice medicine or surgery as a profession.*" To secure this end they propose, first, that the legislature shall enact a law which "shall require all new candidates for recognition and employment as medical men to be examined and approved in all the fundamental and essential branches of medical knowledge by a board or boards of medical experts." It is very justly observed that this must be done without the exclusive recog-

nition of any school or practice, since it is as impossible in this country to have a *state medicine* as a *state religion*; and an invitation is given to "all honorable and self-respecting representatives of all sorts of medical practice" to join in demanding the desired legislative enactment. There is a charming catholicity in this, and we are glad the Michigan doctors have outgrown the littleness of soul which leads some to denounce as quacks and humbugs all who may differ with them as to modes of practice; indeed we begin to have some faint glimmerings of the millennium shining through Michigan pines.

However, we must pass on and notice some of the things said by the committee more directly to the regents. These things are under four heads; viz., requirements of admission, of instruction, of graduation, of general policy. In discussing the first head the regents are asked to require of students entering the medical department at least the same qualifications demanded in entering the literary department, except perhaps Greek; and they are asked too in these very words: "What opinions do intelligent and cultivated people form of a university whose medical graduates betray a disgraceful ignorance even of the branches of a common education, and who on all common questions—questions outside of mere medical knowledge, and on which all educated people stand on a level with the best professional man—daily prove themselves to be grossly illiterate? What must be the judgments of intelligent people concerning the new doctor just come among them, and fresh from the University, whom they find to be ignorant of the history of his state or of the United States? Reasoning as they will from the known to the unknown, what will be their estimate of the *medical* knowledge and skill of that doctor who spells calomel with a *k* and jalap with a *g*?"

Really if such "orthographic mutineers" are graduated by Ann Arbor, whose professors are salaried, what is to be

hoped for from unendowed institutions, since a gift blindeth the eyes and diploma-money is always paid in current funds!

We have not time to further follow the committee in their much plain-speaking to the regents of the University; nevertheless, we must give an extract from the remarks made under the heading *requirements of general policy*, partly because it enunciates a principle which we advocated years ago in the *Western Journal of Medicine*, but chiefly because we believe it is true, and the sooner its importance is recognized by the profession the better. "The teaching function and the graduating power should be divorced, and the latter conferred upon a body who, whether elected or appointed, shall visibly represent to the people the body of the medical profession. We do not question the right of Deity to pronounce the verdict of 'good' upon his own handiwork, but in human affairs it has not been found advantageous to allow a mechanic to pass judgment on his own job. Whenever the revenues of professors are swelled by lengthening the annual list of their graduates we have abundant reason to know that their diplomas quite too often represent lucre and not learning. So also when the rivalry of schools and the vanity of professors disturb their scientific judgment of a student's qualifications, the diploma is quite as apt to be an exponent of faculty pride as of a student's faculty."

T. P.

Annual Report of the Supervising Surgeon of the Marine Hospital Service of the United States. JOHN M. WOODWORTH, M. D.

To most medical writers the appendix to this report will possess the greater interest.

The first of the papers in this appendix is upon *Hospitals and Hospital Construction*, and is from the pen of Surgeon Woodworth. It is preceded by an engraving of the United

States Marine Hospital at Chicago. The paper, which includes some excellent illustrations, is a valuable contribution to the principles which should govern and the methods which should be used in hospital construction, and as such will be consulted with advantage by all engaged in the erection or management of hospitals.

Next is an elaborate paper, by Dr. J. M. Toner, upon *the distribution and natural history of yellow fever as it has occurred at different times in the United States*. A map accompanies the paper, indicating the region in which yellow fever has occurred either in an epidemic or a sporadic form. Dr. Toner believes that elevation above the sea-level is an important factor both in the prevention and in the cure of yellow fever. The map giving the altitudes of places visited by yellow fever shows at once the relation of this factor to the disease, and thus we learn that the disease in an epidemic form has in the United States never been observed in places having an elevation of five hundred feet. There are tables showing the meteorological conditions at Shreveport and at Memphis during visitations of yellow fever, and also one giving the localities in the United States where the disease has occurred since 1668, with elevation above the sea-level, commencement and termination and mortality of the malady, and authorities. The paper evinces access to and familiarity with numerous authorities, and patient research. Its valuable statistics, as well as its clear exposition of fact, gives it more than ephemeral importance.

The yellow-fever epidemic of 1873, which is the next contribution, consists chiefly of reports from surgeons at New York, Mobile, Cairo, Louisville, etc.

A case of double diaphragmatic rupture and hernia is reported by Dr. Thomas T. Minor, and this interesting report is enhanced in value by some interesting observations from Surgeon Woodworth appended to it. Dr. W. remarks that the practical interest of this case for the medical officer of

the service lies rather in the direction of prophylaxis when phrenic hernia is diagnosed, since it is doubtful if any surgical interference could ever be of avail. Further on he gives the following as the more prominent physical signs of this hernia: "1. Cardiac palpitation to the right of its normal location; 2. Thoracic dullness or resonance in unusual regions on percussion; 3. The absence of respiratory murmur and the presence of borborygmi in the chest; 4. Prominence and immobility of the affected side of the thorax. To these may be added such symptoms as liability to dyspnœa on exertion, pains in the hypochondria or chest, colics, costiveness, and frequent nausea and vomiting." Armand Desprez* mentions that in some cases no vesicular murmur has been, but borborygmi have been, heard in the inferior portion of the chest. He also dwells upon the cyanosis observed, and suggests a point that may be of considerable importance: viz., *a priori*, we should expect to find puerile respiration upon the unaffected side.

Dr. C. N. Ellinwood, of San Francisco, has a paper upon *strictures of the urethra*. His observation makes him believe that urethral injections have little to do with their production, except when these strictures are at or near the external meatus, they being frequently caused in these localities by wounding the mucous membrane with the syringe. The treatment he follows in all idiopathic strictures situated anywhere in the urethra beyond two and a half inches from the external meatus is by the "divulsion" method described by Gouley in his recent admirable work.

The last two papers—*the sailor and the service at the port of New York*, and *report on the river-boatmen of the lower Mississippi*—do not claim any special consideration in a medical journal.

T. P.

**Hernies Diaphragmatiques*, vol. xi of the *Nouveau Dictionnaire de Médecine et de Chirurgie Pratiques*.

Medical and Pharmaceutical Notes. By E. R. SQUIBB, M. D.

The first of these notes is on the *preservation of hypodermic solutions*. Dr. Squibb's investigations have led him to conclude that these solutions, being made, as they should always be, with distilled water, can be preserved by the addition of one seventh—or, better still, one sixth—of one per cent of carbolic acid.

The second note is upon *ergot and its preparations*, and contains many facts of considerable professional interest, one or two of which we have mentioned in another part of this journal.

The third note, on *rhubarb*, is more interesting to druggists and pharmacists than to doctors; but the fourth, on *physicians' pocket-cases*, contains some very useful suggestions that medical men will do well to avail themselves of. Dr. S. speaks of its having become in recent years not uncommon even in our large cities for physicians to carry a pocket-case containing small quantities of a few important medicines, such as are needed most promptly and can be dispensed most easily at the bedside. Possibly there is another reason, not mentioned by Dr. Squibb, for physicians carrying with them at least a few medicines: the practice, while causing the physician some trouble but no great expense, would be quite economical for the patients, and thus an argument which some of these have for employing homeopaths would be done away with.

To return, Dr. S. states that two objections to the pocket-cases in use are the want of proper labeling and the absence of means for measuring out medicines. To obviate these objections labels have been prepared, embracing forty-four articles of the active materia medica, and minim measuring tubes, constructed and graduated to single minims, have been made. Almost all the preparations embraced in the forty-four are liquid, not the least extraordinary of which is a

"compound tincture of ipecacuanha," each minim of which is equivalent to a grain of Dover's powder. Good old Dr. Dover would rest uneasily in his grave if he could read what Dr. Squibb has written of his famous "powder" in "a fluid form!" Really we do not believe Dr. Squibb is of Celtic descent, justifying such an apparent bull. It is evident, however, from the therapeutic means he devises, that were he a practitioner he would entirely reject solidism and be a devoted humoralist.

The remaining notes are without any interest to the physician.

T. P.

Clinical Researches in Electro-Surgery. By A. D. ROCKWELL, A. M., M. D., and GEO. M. BEARD, A. M., M. D. New York: Wm. Wood & Co.

This book of seventy-two pages is as modest in its pretensions as in its size. It is not an advocate of electro-surgery. The judicial tone adopted by the writers here as elsewhere can not be too warmly praised. On the whole, the deductions from the cases recorded are favorable to the employment of electrolysis and galvano-cautery in a limited field. Some of the conclusions with respect to the comparative advantages of the two methods just named were quoted in a recent number of this journal. The authors find that their cases of skin-diseases presented the following features worthy of note:

"1. The rapid relief of the itching and pain of eczema, prurigo, and herpes by local applications.

"2. The relieving and curative effects of *central galvanization* not only in prurigo, but also and especially in eczema, which has not generally been supposed to be so closely dependent on the nervous system.

"3. The fact that herpes, prurigo, and eczema yield in some instances very rapidly, while psoriasis and pityriasis are quite slow and obstinate.

“4. The tendency of some cases to relapse even after they have been greatly benefited, while in other cases—notably in eczema and herpes—the cure is more or less permanent.”

We forbear to filch the practical hints incidental to the clinical narrative, which of themselves give a useful character to the book, and which will interest particularly electrical and surgical specialists.

J. W. H.

Lectures on the Clinical Uses of Electricity. By J. R. REYNOLDS, M. D., F. R. S., etc. Second edition. Philadelphia: Lindsay & Blakiston. 1874.

But few changes have been made in this work since the first edition, and only a few were needed, as the progress of clinical electricity has been rather slow during the last three years. The author was careful to avoid all mooted points, and time has shown with what discretion he separated the tares from the wheat. The rarer applications of electricity are merely alluded to, while the ordinary ones are fully considered. It is taken for granted that the reader is familiar with the technical difficulties of the apparatus employed. This allows much more space for the strictly medical aspects of batteries than one would expect in a book so small. As it does not cover the whole ground, it can not be recommended as a complete library of the science; but when one has worked with batteries, or has at hand other resources for learning how to work them, he may find this little book very profitable reading.

Clinic of the Month.

CROTON-CHLORAL HYDRATE (*tetracyl-chloral hydrate*). *—

This interesting substance was accidentally discovered by G. Kramer and A. Pinner, in 1870, when endeavoring to utilize the so-called "forerunnings" (*Vorlauf*) obtained as a waste product in the rectification of crude spirit for alcohol. These forerunnings were found to contain, besides alcohol and small quantities of an organic alkaline salt of acetic acid and of a sharp, odorous liquid, a considerable proportion of aldehyde, which they expected to utilize in the manufacture of chloral. This expectation seemed justified by the theories of the formation of chloral generally accepted, according to which the first reaction of chlorine upon alcohol is to produce aldehyde, which by the further action of chlorine is converted into chloral; the difference in the various theories being mainly confined to the manner in which the aldehyde is so converted. Pure aldehyde was therefore acted upon by dry chlorine, and when the reaction was completed and the product was purified it proved to be entirely distinct from ordinary chloral, and was determined to be *croton-chloral*.

Preparation.—One hundred grammes of pure aldehyde (boiling-point 69.8° to 71.6° F.) is placed into a capacious flask, to which a reversed condenser is fitted, and perfectly dry chlorine is passed through the contents for four days. In the beginning the flask is kept cool by a refrigeratory mixture; but as the reaction, which is exceedingly violent at first, slackens the cooling mixture is substituted by a water-bath, and this is very gradually heated, and toward the end of the

* Compiled for the American Practitioner from German sources by C. Lewis Diehl.

process brought to the boiling-point. The product—consisting of a clear supernatant liquid and a dark-colored heavy oil, which congeals upon cooling—is transferred to a flask and subjected to distillation. The distillate, which passes between 194° and 464° F., is then subjected to fractional distillation, when a product is obtainable which distills completely between 325.4° and 329° F., and is found to be pure croton-chloral.*

Properties.—Croton-chloral is a liquid possessing a peculiar odor, which reminds faintly of common chloral. It forms with water a hydrate, which is crystalline, and with alcohol an alcoholate, which is amorphous. Its composition is $C_8 H_3 Cl_3 O_2$.

Croton-chloral hydrate is produced when croton-chloral is dissolved in warm water. Upon cooling it crystallizes in white, silky, glistening leaflets, which are sparingly soluble in cold water, but freely soluble in hot water and in alcohol; and from its alcoholic solution it crystallizes unchanged. It melts at 170.6° F., and is readily vaporized with aqueous vapor; its vapor being exceedingly irritating upon mucous membranes, and especially upon the eyes.

Action of alkalis.—By the action of alkalies upon croton-chloral or its hydrate it is not, as might be expected, split into allyl-chloroform and formic acid, but forms instead dichlorallylen ($C_6 H_2 Cl_2$) and formic acid.

Dichlorallylen is a pleasantly odorous oily liquid, which boils at 172.4° F.; but is quite unstable, losing its pleasant odor, acquiring that of phosgene, and eliminating chlorine.

Relation to common chloral.—Croton-chloral bears the same relation to crotonic aldehyde and to crotonic acid that does common chloral to acetic aldehyde and to acetic acid. In this connection it is of interest that crotonic acid of the com-

* My authorities omit to indicate the use of sulphuric acid to dehydrate and purify the croton-chloral hydrate formed primarily, such being undoubtedly the heavy oily layer which solidifies on cooling.

position usually assigned it ($C_8 H_5 O_3$) does not exist naturally in croton-oil; and that consequently the artificial derivatives, based upon an acid of the composition $C_8 H_5 O_3$, are wrongly named after crotonic acid. An acid of composition $C_8 H_5 O_3$ has been obtained by Geuther and Fröhlich from both artificial and natural cyanide of allyl (vol. oil of mustard) by the action of potassa, and is by them called *tetracylic acid*. Hence it is suggested that croton-chloral is more properly named *tetracyl-chloral*.

Croton-chloral hydrate possibly a constituent of commercial chloral hydrate.—It will be noted from the above that physically the croton-chloral hydrate differs from the ordinary chloral hydrate by its sparing solubility in cold water and in the exceedingly irritant character of its vapor. Chloral hydrate, to the contrary, is freely soluble in water, and its odor when pure is not irritating. Nevertheless, nearly all commercial chloral hydrate has a more or less irritating odor, and it is inferred that this is owing to the presence of croton-chloral, formed either from aldehyde contained as impurity in the alcohol or from aldehyde generated by the action of chlorine. No experiments have, however, been made in this direction to prove the correctness of the inference.

The formation of croton-chloral from aldehyde is readily explained by the observation already made by Kekule, that acetic aldehyde is readily transformed into crotonic aldehyde by the presence of even minute quantities of muriatic acid. Under these circumstances two equivalents of acetic aldehyde $C_4 H_4 O_2$ unite with the loss of two equivalents of water, and form one equivalent of crotonic aldehyde $= C_8 H_6 O_2$.

Properties and pharmaceutic exhibition of commercial croton-chloral hydrate.—I have before me a sample of croton-chloral hydrate purchased in New York; the original source is unknown. It is a white, powdery substance, of a pearly luster, apparently crystalline, and when triturated in a mortar has the appearance and feels to the touch like pulverized valerianate

of zinc. Its odor reminds of ordinary chloral hydrate and iodoform; does not seem to be more pungent than that of ordinary commercial chloral hydrate, and not as much so as some samples I have noticed. Its taste is bitter and aromatic, reminding of the odor of iodoform. It is more soluble in cold water than I should have expected from the characteristic, "sparingly soluble," given it by its discoverers. Thirty minims distilled water dissolve one grain readily. If another grain is added to this solution, heat is required to dissolve it, and upon cooling and standing a short time a copious crop of well-defined crystals is obtained. Subsequent experiments proved it to be soluble in between twenty-two and a half and twenty-five parts of water at a temperature of 60° F. In alcohol it was found to be freely soluble.

From these experiments it follows that croton-chloral hydrate (commercial) may be dispensed in aqueous solution of a strength corresponding to two grains in the fl. drachm. A very pleasant vehicle for its administration seems to be the simple elixir as prepared in our city, and the following prescription illustrates the manner of its use:

R. Croton-chloral hydrate, . gr.vijj;
 Warm water, fl.ʒj;
 Simple elixir, fl.ʒvij. Ft. solut.

Owing to the alcohol contained in the simple elixir, a larger quantity than two grains to the fl. drachm could, if desirable, be incorporated and held in solution by the above mixture.

The sources from which the main portion of the above paper on croton-chloral is compiled are *Jahresbericht d. Chemiz*, by Nauman, 1869-70; and *Jahresbericht d. Pharmacie*, etc., by Wiggers and Husemann, 1869-71. The original papers are to be found in the *Bericht der Deutschen Chemischen Gessellschaft*, Berlin, 1869-71.

THE TREATMENT OF OTORRHOEA.—The pathology of the auditory apparatus, says M. Ménière, is in general too much

neglected by those who practice general medicine and surgery ; and in a large number of cases, even when perfectly simple and uncomplicated, the practitioner is uncertain what plan of treatment should be recommended. Even in cases where it can not be expected that the treatment should equal that of the specialist, who is rapid in his diagnosis and expert in the use of instruments, it is yet the duty of every surgeon to take care that the affliction should not be allowed to become incurable, and to give some alleviation to the sufferings of the patient. Take, for example, the case of discharge from the ears, so frequent in childhood and youth. What is the procedure often adopted? They are left alone to run their own way, in fear lest the sudden suppression of the discharge should injure the general health of the child ; or some injections are tried, often very imperfectly accomplished, and if the discharge still continues no further trouble is taken till the infirmity has become incurable. M. Ménière cites a case of a tall, fair, but not scrofulous youth, twenty years of age, who was sent to him, and who at the age of seven or eight had been attacked with discharge from the ears after some eruptive fever. No systematic treatment had been adopted for him, but occasionally injections had been practiced. He passed his childhood, and at eighteen came to Paris. The discharge continued, and steady increase of deafness was observed. On examination M. Ménière found that serious lesions of the auditory apparatus were present. The membrana tympani was destroyed, vegetations had sprouted from the walls of the tympanic cavity, and there was a purulent discharge. Appropriate treatment being commenced, great improvement resulted, but of course without change in the irreparable damage that had taken place, and which might certainly have been prevented had proper care been expended upon him while a child.

In all cases of otorrhœa great attention must be paid to the constitution, so that scrofula, syphilis, or other consti-

tutional disease should be treated by appropriate general measures. In this lies an essential element of success in all instances. Systematic injections play an important part; they can not do harm, and they are almost certainly productive of immense advantages. Cleanliness is a capital point in the treatment of otorrhœa, and nothing is better for this purpose than pure warm water injected from an ordinary syringe with moderate force, the nozzle being placed fairly within the meatus. The caoutchouc pears may be used, but the stream they give is less continuous and strong than that from a syringe. In the early stage, and when the otorrhœa is accompanied by sharp pain, the treatment is but little different. A good injection is composed of warm decoction of marsh-mallow, in which one or two poppy-heads have been boiled; this may also be poured into the affected ear, the patient resting his head on the sound side. A leech or two may also be applied behind the ear, the second being allowed to attach itself to the same point seized by the first. The whole ear may be covered with a poultice of linseed-meal on which a little laudanum has been sprinkled. M. Giampière recommends as a topical application the instillation into the meatus of two or three drops of a liquid containing one sixth of a grain of aconitina in one ounce of distilled water. M. Ménière rejects the instillation of laudanum, ether, or chloroform. He objects also to the instillation of oil of almonds and other similar fluids so commonly employed. He thinks they often serve to aggravate the original evil. Where the pain is very intense he adopts the plan of subcutaneous injections of morphia, etc. Otorrhœa of old-standing is more frequently complained of by patients than acute attacks, and in their treatment warm injections are always indicated. The fluid injected may either be pure water or a very weak solution of alum, one to five grains in two ounces. Solutions of sulphate of zinc and acetate of lead may also be used of the same strength. No other treatment will effect improvement

if injections, which remove pus and the secretions of the meatus, are neglected. A little piece of wool dipped in a weak solution of carbolic acid may be placed in the orifice of the meatus after each injection. A little weak solution of nitrate of silver may be employed in the same way, and may also be injected once a day, the ear having been first thoroughly cleansed by the injection of warm water, and dried by the subsequent introduction of a little warm, dry wool. Neither of these topical applications, and especially of carbolized glycerine, is painful or harsh, as they simply cause a tickling sensation in the ear, and the secreting surface is thus modified without harm. M. Ménière frequently uses the following lotion, the ear having been previously injected with water and dried: water, 200 parts; glycerine, 100 parts; sulphate of zinc, 5 to 6 parts. Another lotion, which may be used even when there is great vascularity at the bottom of the meatus, and even in cases of perforation of the tympanum, is acetate of lead, 5 to 15 parts; water, 300 parts. In both cases a few drops may be allowed to remain in the ear for eight or ten minutes.

By the use of these means it is not to be expected that every case of otorrhœa will be cured, but at all events the disease will be prevented from getting indefinitely worse, and the patient placed under the most favorable conditions for special treatment. (*Journal de Médecine.*)

SUBCUTANEOUS INJECTION OF EXTRACT OF ERGOT IN FIBROMYOMA OF THE UTERUS.—Prof. Heilbrandt (*Schmidt's Jahrb.*, Bd. 156) injected ergot subcutaneously in the case of a woman, thirty-three years of age, who suffered from menorrhagia, fluor albus, and occasional pains. Three years before she observed a tumor in the hypogastric region, which was diagnosed as intra-uterine fibroma. The tumor had the size of a uterus in the seventh month of pregnancy. All means for checking the hemorrhage having failed, and the tumor

retaining the same size after one year, a syringeful of a solution of ergotine (3.0 ad glycerine et aq. dest. āā 7.5 gramm.) was daily injected for two weeks. The next menstruation was less painful, and the quantity diminished. The tumor diminished from week to week, and had disappeared within fifteen weeks. Menstruation, however, had returned in the same degree as before the disappearance of the tumor. In eight other cases Heilbrandt observed the same result. His explanation is that the ergotine causes diminished nutrition of the tumor by giving rise to a convulsive condition of the vessels supplying the tumor, also by the compression exerted by the contracting walls of the uterus; general fatty degeneration and resorption therefore result. Intra-uterine tumors are hence more easily removed than subperitoneal by means of this injection. These injections are less painful than with the solutions of Langenbeck, and are to be made in the umbilical region or the hips. (New York Medical Journal.)

TRANSFUSION.—The Paris correspondent of the Irish Hospital Gazette writes that M. Béhier is decidedly in favor of transfusion, and is surprised that it is not more generally adopted in practice. He prefers "immediate transfusion," and the injection of blood in as natural a state as it is possible to procure it—that is, with all its elements; but the difficulty is to find proper instruments to carry out the operation. Defibrinated blood is most objectionable for the following reasons: it has been proved by experiment that blood in this condition circulates less easily in the blood-vessels, and may become the starting-point of hemorrhage in the parenchyma. Moreover, the blood-corpuscles when once removed from the living organism are extremely short-lived, and defibrinated blood must therefore be dead blood. But it may be objected that defibrinated blood has been employed with some success; to which the reply is that the same success may attend the injection of any fluid, as experimentally proved by M. Vulpian.

He lays down the following precepts for the practice of transfusion: 1. Inject the blood slowly; 2. Inject only a small quantity at each operation.

Transfusion, he continues, has been condemned in certain quarters, owing to accidents that have followed the operation; these are convulsions, vomiting, rigors, cephalalgia, and syncope. The latter is the most serious, but this may be avoided by injecting the blood slowly and with prudence. There is, however, another accident equally serious, to which M. Béhier directs particular attention, as it has not been as yet described in books; viz., a certain degree of stupor experienced by the patient when the blood injected exceeds a certain quantity, which may end in death by coma. Fortunately this may be averted by stopping the injection directly the patient is seized with coughing, which M. Béhier looks upon as a precursory or warning symptom of the above condition; and the explanation is in the too rapid repletion of the capillaries of the lungs. The quantity of blood to be injected should not exceed three ounces. There are still two other sources of danger in transfusion which ought not to be overlooked; the entrance of air into the veins, which generally proves fatal, and the coagulation of the blood, which is equally fatal by producing a mechanical obstruction to the circulation. It is therefore obvious that in the practice of transfusion measures ought to be taken to prevent such dangerous accidents. The instruments now in use are very defective.

COLD BATHS IN TYPHOID FEVER.—Dr. Béhier, of Hotel Dieu, Paris, in a recent clinical lecture on Brand's method of treating typhoid fever, thus sums up (Practitioner) its advantages:

“By means of a few baths administered in each twenty-four hours we succeed in beating down and mastering a febrile movement which every thing seemed to show would be violent and lasting. In satisfying this essential indication, the

lowering of temperature, hydrotherapy weakens at the same stroke almost the whole group of the symptoms of typhoid pyrexia. The nervous centers are the first and the most happily influenced; the delirium departs, the intellectual torpor is banished, the patient comes back to himself, and interests himself in what surrounds him; at the same time the carphology, the *subsultus tendinum*, and all the other indices of profound nervous perturbation disappear. The respiratory center also participates in this remarkable modification; the inspirations become deeper, slower, more powerful; hematosis is effected more completely, and the bronchi, resuming their contractility, expel the secretion which obstructs them. The skin resumes its tone and its suppleness; the blood, propelled by the heart in stronger and more regular waves, circulates more actively and revives the stagnant secretions. Even the digestive canal presents a notable improvement, the tongue cleans and becomes moist, thirst subsides, and tympany diminishes."

TURPENTINE IN RENAL AFFECTIONS.—Dr. E. Maitel, of St. Malo, records the following interesting cases in which turpentine proved of great service:

A man, aged forty-five years, fell in the dark from a height of twelve or fourteen feet on some Dutch tiles. The left side was injured. The next day a large contusion was apparent on the left side, with a fracture of the corresponding iliac crest, the fracture separating a portion parallel to the border of the bone. From the time of the accident a considerable quantity of blood passed with the urine. On the succeeding days the ecchymosis became more and more pronounced and the hematuria continued unchanged. There were no clots, but the blood was mingled with the urine, and a reddish black deposit took place. There was no pain nor any sign of lesion of the bladder. There were few or no febrile symptoms. The treatment was in the first instance external; but

in consequence of the persistence of the hematuria M. Martel administered turpentine in capsules internally, and found that in twenty-four hours the urine became limpid, and in ten days more the patient was able to travel. M. Martel has no doubt that in this case some lesion of the kidney occurred, and the action of the turpentine was in accordance with the old notions of its being a hemostatic.

In the second case recorded by Dr. Martel a gentleman in good circumstances saw his father die from cancer of the stomach, and from apprehension that he should himself be a victim to it became hypochondriacal, with some gastric derangement, indicated by slight pain and flatulence. The impairment of his wife's health necessitated relative continence. The spermatic discharge became red, and resembled the pulp of the gooseberry stained with blood, the staining probably taking place in the vesiculæ seminales. No gonorrhea either past or present. M. Martel adopted a general tonic line of treatment, with cold baths; but finding no improvement take place sent him to Professor Gubler, who prescribed turpentine, and under this treatment complete recovery occurred. (*Bulletin Général de Thérapeutique*, liv. 8, 1873.)

THE GROWTH OF CICATRICES.—Mr. W. Adams, in a paper read before the Medical Society of London, demonstrates that scars made in childhood grow with the general growth of the body. He exhibited casts taken at different periods of life, in some of which a growth of as much as an inch had taken place in the course of six or seven years. After deep wounds, or when a portion of skin has been destroyed, the cicatrix appears to be persistent through life. Although all cicatrices at the time of their formation are much less than the wounds from which they result, still if the wounds should be made in early childhood the resulting cicatrix will be at the completion of growth very much larger than the original wound; but cicatrices of wounds made after

the completion of growth maintain through life the same proportions. With regard to the wearing out of scars, Mr. Adams thinks that those scars only wear out which result from superficial cuts, which do not penetrate fairly through the deeper layers of the skin into the subcutaneous fat. (British Medical Journal.)

THE TREATMENT OF PNEUMONIA IN CHILDREN.—Dr. Wm. Stephenson, in a series of articles contributed to the Edinburgh Medical Journal, entitled "Children's Hospital Papers," thus speaks of the management of pneumonitis:

"The treatment adopted in the cases recorded, except where otherwise stated, consisted of warm poultices to the chest and a simple mixture containing acetate of ammonia, so that they may be regarded as having run their natural course uninfluenced by medicine.

"Treatment may be directed toward very different ends, and it is part of the physician's art to determine for what purpose his aid is required. Many cases occur where nothing further is necessary than to place the patient under the most favorable circumstances for recovery. Some remedial measures are required in others, not as against the disease, but to relieve the suffering and promote the comfort of the patient. At times also concurrent phenomena may arise, endangering life, distinct from the phenomena proper to the disease, and these must be met. While, lastly, the treatment may be directed against the disease proper, with the aim of modifying or cutting short its course.

"Nothing I know of in medicine entitles us to expect that we can ever change for good the well-marked typical course of acute pneumonia. Before ever the patient can be brought under our care the system has received a morbid impulse, by which a pyretic wave has arisen which will run its course. There can be no true cutting short the disease. Where such a term is used it can only apply to the prolongation out

of due limit of the affection. Any time after the fifth day a rapid and favorable termination may occur, and this natural course has undoubtedly led in former times to very erroneous opinions as to the result of active interference.

"The test of treatment should be the closeness with which the fever accords to the normal type. It is not necessary to show any material lowering of temperature or pulse so long as these are within the normal range; but it is essential, whether the range is affected or not, that the typical course should be retained. Should the treatment adopted succeed in lowering the range during the first five or six days, but at the same time the chart show a divergence from the normal character as regards crisis, and especially if the stage of convalescence is delayed, then I should regard such treatment as unsuccessful and meddlesome, although it terminated in recovery.*

"When the range of temperature or pulse is above the normal for the disease, or the one out of due relation to the other, such excess should be combated. And if evidence of reduction is found, it is then legitimate to gain it at the expense of protracting the recovery. If, again, life be endangered by any special condition, the means of counteracting it may likewise be bought at the expense of the convalescence. But, with these exceptions, the value of therapeutic agencies is only to be estimated by the accordance with the typical character of the disease.

"The alchemists of old were great experimentalists, and succeeded in forming many chemical substances; but the science of chemistry made no advance so long as air and water were regarded as elements, and that phlogiston entered into and devoured a body like a ravenous animal. Nor is our position far different so long as we regard and treat fever and inflammation as either simple or invariable compound

* This, according to M. Barthez, is the effect produced by indiscriminate active measures, especially blood-letting.—*Syd. Society Year-Book*, 1862.

states, or that there is any entity in disease, to be met by the same treatment in all cases. That fever is a complex state, and that its elements enter into varying proportion with one another, is duly recognized in the science but much less so in the art of medicine. We have two of its elements, and are able to estimate and record them in the temperature and pulse, and these have of late been too much regarded as the sole representatives of fever. But there is another element which we can as yet but inferentially estimate and can not record, and on this account probably it has been too much lost sight of.

“Physicians in feeling the pulse constantly take cognizance of more than its rapidity; the character is all-important. We constantly see the same phenomena, especially nervous symptoms, occurring under two very different and opposite states of the system. The same temperature may occur at the beginning and at the end of a fever, but with different significance. Why is the diurnal range of temperature at the beginning of a fever so much more steady than at the end? Why are some febrile states characterized by great oscillations between morning and evening temperature? There is an important something in all these which is not directly represented in our charts, but of which in treatment we must take cognizance. This something I am in the habit of speaking of as tension, a term used in electricity, and probably a closely-allied condition to what it there represents.

“The estimation of this condition is of great importance. The degree of tension makes up the difference between two cases which may present the same average temperature. Treatment may be directed toward it, and we may succeed in lowering the tension without affecting the temperature; another point which is too much overlooked at the present time, when temperature is taken as the chief representative of fever. The relative range of temperature and pulse, I am inclined to think, may yet afford us some means of estimating

the tension. Thus in the case of Lonie (No. 3) there occurred the temperature of 106° , with a pulse relatively much too low—viz., 124—and the tension at the time was very high; while in other cases 104° was associated with a pulse of 130 to 136; and this is just the condition which physiology teaches us would exist. On the other hand, as we have seen, the fatal cases presented a pulse relatively too high for the temperature. If I am right in my inference, successful treatment may be represented by an actual rise in the rate of the pulse.

“The influence of tension on temperature may also perhaps be seen in the degree of oscillation between morning and evening, where tension is great, as at the beginning of the inflammatory attack the range is even, but when slight the oscillations increase; and when they have been well-marked and a complication occurs, as in the case with empyema, the temperature again becomes steady.

“Thus we may be able inferentially to deduce the amount of tension from the data on our charts, and the evidence so gained must be carefully weighed in deducing the results of treatment. In the treatment of acute febrile diseases the attention of the profession has lately been entirely directed to the reduction of the pulse and temperature, and the value of remedial measures estimated by this alone. By so doing it is my opinion that we lose sight of many important indications, and are apt to overlook much benefit that may be derived from remedies which do not affect directly the temperature. If the height of the temperature is within the normal type of the disease, and if the pulse is within the normal relation to that temperature, little good will be got by any attempts to alter their range, etc.

“As I have already pointed out, the prognosis of pneumonia depends much less upon the height of the temperature alone than upon the relation of pulse and temperature. It is therefore to this point our attention should be addressed, and

to the other means whereby what I have termed tension may be estimated.

“The use of warm compresses to the chest is of great value in all cases. Where tension is great, and where head-symptoms are present, the whole body may be placed in a warm ‘pack.’ No means is more conducive to the comfort of the patient; the general uneasiness and sense of fullness of the system is allayed and natural sleep induced. At the same time, it must be remarked, I have never observed any decided change in the temperature or pulse from the use of the pack, but nevertheless the quiet and comfort afforded thereby is very evident.

“Where further means are necessary to reduce tension, we have the selection of three valuable remedies—aconite, antimony, or ipecacuan; but the good to be got from these is only within the first thirty-six or forty-eight hours. They should not be continued longer, and never, for any theoretical action upon the lung-lesion, should they be given when the pulse is relatively high for the temperature. The large majority of cases indeed may be best treated by ipecacuan or aconite and acetate of ammonia. The value of aconite in acute inflammatory disease may be denied if we judge of it by its power of lowering pulse and temperature or cutting short the disease. Looking for its action in these quarters, I long disbelieved in its good effects, but have lately had my confidence in it renewed by observing the increased comfort of the patient and the lowering of the tension where high under its use. I have not yet, however, been able to record a definite action in the clinical chart to change mere opinion into conviction. In Case V (John Gill), where aconite was given throughout the febrile attack, it is worthy of note how the convalescence was prolonged by recurring high temperatures. Without assigning this to the effect of the unnecessarily prolonged use of the remedy, the circumstance must be noted at present in connection with it.

"In a few rare cases, in healthy children, where the onset of the disease is associated with considerable dyspnœa, blood-letting by leeches between the scapulæ may be employed with undoubted effect; also when pain in the chest is very severe and preventing rest a single leech to the seat of pain will afford great relief.

"Where the pulse is high in relation to the temperature quite an opposite line of treatment must be followed. Here quinine, iron, and digitalis, singly or in varying combination, are the remedies indicated. In pneumonia occurring amidst the sequelæ of scarlet fever I have seen good results also from belladonna. The selection must turn upon the due recognition of the constitutional state giving rise to the inordinate pulse. Various conditions may so act; the effect of the high temperature upon the nervous system, the amount of blood-deterioration, a general cachetic state, or simple atony of the muscular vascular system.

"Several remedies may likewise be employed to minister to the comfort of the patient. I would specially mention morphia and spirit of chloroform.

"Salines may be given from the first, in combination with the other medicines enumerated, and their use may be continued with benefit after the febrile stage has passed off, during the process of resolution. In this stage alone, and when the health of the child has been previously good, is any benefit ever to be derived from the use of mercurials. Where the process of resolution is tardy or has been arrested I have seen decided benefit from *small* doses of mercury."

FISSURES IN ANO TREATED WITH IODOFORM.—Dr. Francesco Parona gives his experience of iodoform in fissures of the anus, and strongly recommends it. He believes it acts in great measure as a local anæsthetic, "which allays the spasm of the sphincter during defecation, while it favors cicatrization by neutralizing the irritating effects of fecal matters which

remain on the ulcerated surface." It has also a direct healing action. Dr. Parona uses the iodoform as an ointment (one part to three of lard), and applies it on a small cylinder of charpie of a size requiring but little force for its introduction. The charpie has the advantage that its filaments adapt themselves readily to the slight irregularities of the anal mucous membrane. The dressing is changed twice a day, and replaced after each motion, and in the majority of cases the pain and spasm caused by the fissure cease in a few days, and the patient is well in a relatively short time. Of four cases, of which details are given, the longest time was twenty days, while one of the patients had been ill four months previous to the treatment. (*Medical Times and Gazette.*)

A NOVEL REMEDY FOR HOOPING-COUGH.—Dr. J. E. Wendel, of Murfreesboro, Tenn., writes:

"I was called three weeks ago to see a little white girl, seven years of age, who had had pertussis four weeks; had been coughing, hooping, and vomiting furiously. I visited her to see what injuries she had received from falling from the second to the first floor of the dwelling (fourteen feet) striking on her back on the floor. When I arrived she had recovered consciousness, but complained of some pain through the chest. The next day she was up and has been to this time, and seems to be entirely cured; coughs almost none at all; does not hoop any. Three or four other children in the same family, who contracted the disease at the same time, are still coughing, hooping, and vomiting. I do not recommend the remedy, but give it as one of the curiosities of my experience. The explanation of the cure is, I apprehend, easily given."

Notes and Queries.

SULPHATE OF QUINIA AS A PREVENTIVE OF FEVER.—Our readers may remember a paper, by Dr. Littell, of Philadelphia, published by us some years ago, in contravention of the commonly-received opinion of the malarious origin of our autumnal fevers; attributing them instead to variations of electrical tension acting on systems debilitated by the heat of summer, and suggesting the use of quinine as a preventive. The following extract from Frank Vincent's "Land of the White Elephant," a book recently published by the Harpers, is confirmatory of the view taken by that gentleman in regard to the prophylactic influence of the article mentioned:

"It was our practice to walk" (across Southern Siam) "as much as eight miles every day, the remainder being accomplished on horseback; and the sun being excessively hot at noon and night, we were, of course, much exhausted. At such times two or three grains of quinine soon wrought a happy change in our feelings. Quinine taken as a precaution or an (almost) preventive of fever is an invaluable medicine every where in the tropics. It is a powerful tonic, and if used in moderation strengthens and builds up the system, leaving no unpleasant effects, no depressing reaction; besides, a large quantity may be carried in small bulk, and with the addition of a little water, or even taken dry, it is always in readiness for immediate use."

Dr. Hutchinson, of Bangkok, recommended the travelers to take every morning three grains in their coffee.

DR. GEORGE THOMPSON.—In "Some Recollections of the Medical Society of Tennessee," published by the writer two years ago, the name of Dr. George Thompson was mentioned as one of the few early members of the society who still survived. A few days since we received intelligence of the death of this old friend, the last pupil whose private medical education was pursued under the same roof with the writer. He died at Gallatin, on the 2d day of April last, in the seventy-ninth year of his age, with a memory unimpaired, and all the powers of his mind active until within a few hours of his death. He was attending a meeting of the session of his church, and while thus engaged was smitten with apoplexy and had to be carried home. He never rallied, but died in a few hours. His life was "a long disease," and yet few physicians have pursued their profession more laboriously. In every sense of the word he was a good physician.

L. P. Y.

THE AMERICAN MEDICAL ASSOCIATION.—The Twenty-fifth Annual Session will be held in the city of Detroit, Mich., on Tuesday, June 2, 1874, at 11 A. M.

"The chairmen of the several sections shall prepare and read in the general sessions of the association papers on the advances and discoveries in the past year in the branches of science included in their respective sections. . . ."—*By-laws*, art. ii, sec. 4.

SECTIONS.

Practice of Medicine, Materia Medica, and Physiology—Dr. N. S. Davis, Chicago, Ill., Chairman; Dr. George E. Frothingham, Ann Arbor, Mich., Secretary.

Obstetrics and Diseases of Women and Children—Dr. Theoph. Parvin, Indianapolis, Ind., Chairman; Dr. Montrose A. Pallen, St. Louis, Mo., Secretary.

Surgery and Anatomy—Dr. Samuel D. Gross, Philadelphia, Pa., Chairman; Dr. Alonzo Garcelon, Lewiston, Me., Secretary.

Medical Jurisprudence, Chemistry, and Psychology—Dr. A. N. Talley, Columbia, S. C., Chairman; Dr. E. Lloyd Howard, Baltimore, Md., Secretary.

State Medicine and Public Hygiene—Dr. A. N. Bell, Brooklyn, N. Y., Chairman; Dr. A. B. Stuart, Winona, Minn., Secretary.

“Papers appropriate to the several sections, in order to secure consideration and action, must be sent to the secretary of the appropriate section at least one month before the meeting which is to act upon them. It shall be the duty of the secretary to whom such papers are sent to examine them with care, and, with the advice of the chairman of his section, to determine the time and order of their presentation, and give due notice of the same. . . .”

By-laws, art. ii, sec. 5.

The following committees are expected to report:

On Cultivation of the Cinchona-tree—Dr. L. J. Deal, Pennsylvania, Chairman.

On the Treatment of Fractures—Dr. Lewis A. Sayre, New York, Chairman.

On Gynecology—Dr. M. A. Pallen, Missouri, Chairman.

On some Diseases peculiar to Colorado—Dr. John Elsner, Colorado, Chairman.

On Rank of Medical Corps of the Army—Dr. J. M. Keller, Kentucky, Chairman.

On Prize Essays—Dr. G. K. Johnson, Michigan, Chairman.

On the Progress of Otology—Dr. D. B. St. John Roosa, New York, Chairman.

On American as compared with Foreign Winter Cures—Dr. H. R. Storer, Massachusetts, Chairman.

On Railroad Injuries—Dr. W. F. Peck, Iowa, Chairman.

On the Therapeutics of Ammonia—Dr. P. J. Farnsworth, Iowa, Chairman.

On the Relation of Physiology to the Practice of Medicine—Dr. E. W. Gray, Illinois, Chairman.

On Puerperal Fever—Dr. W. O. Smith, Kentucky, Chairman.

On the Legal Relations of Moral Insanity—Dr. E. L. Howard, Maryland, Chairman.

The following amendments to the Plan of Organization are to be acted upon:

By Dr. N. S. Davis, Illinois: Strike out the second paragraph of Art. II and insert the following: “The delegates shall receive their appointment from permanently organized state medical societies and such county and district medical societies as are recognized

by representation in their respective state societies, and from the Medical Department of the Army and Navy of the United States."

Also strike out the fourth paragraph of same article and insert: "Each state, county, and district medical society entitled to representation shall have the privilege of sending to the association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half that number. The medical staffs of the army and navy shall be entitled to four delegates each."

By Dr. P. Pineo, of Massachusetts: Art. II, second paragraph, after "army and navy," insert "and the Marine Hospital Service of the United States." By-laws, sec. 6, after "the chiefs of the bureaus of the army and navy," insert "and the supervising surgeon of the United States Marine Hospital Service."

By Dr. E. L. Howard, Maryland: Strike out the second clause of first paragraph, Art. IV, and insert: "They shall be nominated by the Judicial Council, and shall be elected by vote on a general ticket."

By Dr. A. S. Maxwell, of Iowa: "Resolved, that in view of the many and important duties imposed upon the Nominating Committee, the medical society of each state and territory that elects delegates be requested when selecting delegates to nominate one member of such delegation as their member of the Nominating Committee, and also designate the mode of filling vacancies."

By Dr. A. M. Pollock, of Pennsylvania: Art. VI, first paragraph, strike out the word "five" and insert "ten." By-laws, Art. V, first paragraph, strike out "five" and insert "ten."

Secretaries of all medical organizations that have adopted the Code of Ethics are respectfully requested to forward to the undersigned a complete list of their officers, with their post-office addresses, and the number of their members in good standing. This is the only guide for the Committee of Arrangements in determining as to the reception of delegates. It will also enable the Permanent Secretary to present a correct report of the medical organizations in fellowship with the association.

W. B. ATKINSON, *Secretary*,
1400 Pine Street, Philadelphia.

THE AMERICAN PRACTITIONER.

JUNE, 1874.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Communications.

REMARKS CONCERNING DISEASES OF THE CENTRAL NERVOUS SYSTEM.

BY A. D. ROCKWELL, M. D.,

Electro-therapeutist to the New York State Women's Hospital.

An exceedingly interesting point in the consideration of diseases of the spinal cord is the discrepancy between observed symptoms and the authoritative statements in regard to the necessary and constant relation of certain symptoms with certain central diseases. In pathological conditions of the brain and spinal cord, more perhaps than with other organs of the body, it is difficult—nay, utterly impossible—to associate a long list of distinct symptoms, with some change or tendency to change of structure, and say that they invariably exist as effects and cause. Variations from the physiological condition of the great nerve-centers so markedly and undeniably run into and overlap each other—are so frequently, as it were, intertwined—that it is hard for the most careful observer to do more than to arrive at approximately correct

conclusions as to the actual pathology. Irritation and congestion of the cord may co-exist. Congestion of a severe and chronic character may simulate actual sclerosis, and hysteria, associated with a mild form of either irritation or congestion, may give rise to symptoms of anæsthesia and such decided impairment of electro-muscular sensibility as to completely mislead the practitioner and suggest the existence of serious organic disturbance. As an illustration of these remarks I will cite the following case:

Mr. B. W., aged seventeen years, but exceptionally mature both in physical and mental endowments, was referred to me by his physician, Dr. John J. Crane. The patient, who was a student at Harvard, stated that some weeks previously he had one afternoon walked quite briskly and for a considerable length of time, and while in a state of perspiration had reclined upon the grass until a sense of chilliness warned him of his imprudence. During the rest of the day and on retiring at night he observed no unusual symptoms, but in the morning the legs were found to be stiff and weak, associated with a decided loss of co-ordinating power. In short, the patient was suffering from incomplete paralysis in a paraplegic form. There was slight but marked tenderness along the spine on pressure, but no exaggeration of reflex excitability in the limbs, and no appreciable impairment of electro-muscular contractility or sensibility. Anæsthesia was quite decided in the calves of the legs and the toes, but any sensation of tingling was altogether wanting.

It seemed sufficiently clear that the case was primarily one of spinal congestion, and our first impulse was to trust to galvanization of the spine; but on further thought, and taking into consideration the recentness of the attack and the remarkable effects of general faradization in equalizing the circulation, I submitted the patient to a most thorough but mild seance of the last-named method, and directed him to call on the following day. On his return I found that the

anæsthesia had almost entirely ceased to annoy him, his limbs were more supple and stronger, and there was a manifest increase in the power of co-ordination. Substantially the same method was employed on seven different occasions, from May 3d to May 13th, when he returned to his studies completely recovered.

It is in just such cases as the above that the mistaken diagnosis of muscular rheumatism has so often been made. This error in diagnosis has in the past been of such frequent occurrence that it is proper to simply call attention to the peculiar sensory symptoms that are invariably associated with most diseases of central origin. These symptoms are sufficiently distinctive, and a practical acquaintance with them will render it comparatively easy to differentiate such disorders as spinal congestion and irritation, and the peripheral affections with which are associated symptoms somewhat analogous.

Locomotor ataxy itself has in its earlier stages frequently been mistaken for muscular rheumatism, and at this time I have under my observation a gentleman afflicted with spinal sclerosis, which for upward of a year was thought by his physician (a most intelligent practitioner) to be a persistent form of rheumatism. To take cold in the cord is an occurrence far more frequent than is generally believed; and while the primary congestion that ensues may yield most readily to treatment, it may, if neglected or increased by continued exposure, lead to irreparable structural change.

In the above case it will be observed that anæsthesia was a prominent symptom, while there were absolutely no sensations of formication or tingling present. Tenderness on pressure along the spine was decided, and yet we find various authors stating that in spinal congestion not only is this symptom wanting, but so also is anæsthesia, while the sensations of formication and tingling in either the toes or fingers are almost invariably present. We must account for this discrepancy then and want of accord among authorities in the

consideration of these and kindred disorders of the central nervous system on the basis of the liability of two or more of them to occur at the same time and in the same individual. Sometimes the symptoms of one pathological condition may be the more prominent, sometimes the symptoms of another, and occasionally it may be observed by one whose experience is at all extended that spinal congestion and irritation occur together as affections, so to speak, co-ordinate and co-equal. In this case congestion of the cord was undoubtedly the predominant condition, while the symptom especially of tenderness along the spine on pressure rendered it evident that irritation was present as well.

In regard to the most effective method of electrization in the treatment of spinal congestion and irritation it must be remarked, in the first place, that they are exceedingly capricious in their demands on the skill and experience of the electro-therapist. No one method will answer in all cases, neither is there any law in electro-physiology so precise and with such well-adjusted relations to electro-therapeutics as to enable us to lay down specific rules for treatment. It is true that the application of electricity to the human body may produce certain modifications of animal electricity, together with other and peculiar physiological phenomena. When a nerve, for example, is submitted to the action of the galvanic current certain changes occur in its condition dependent on the local action of the electricity; and independent of this local action the direction of the current exercises a decided effect through its power to influence either the excitability of the motor or sensitive nerves.

The ascending current increases excitability, increases reflex action, acts most powerfully on the sensitive nerves, and influences the motor nerves through its direct and not through its reflex action on the spinal cord. The descending current, on the other hand, diminishes both excitability and reflex action, acts most powerfully on the motor nerves, and influ-

ences them by reflex and not by direct action on the cord. These principles, which are thought to be established, are undoubtedly of practical importance in the treatment of disease; but unfortunately they do not afford a sufficient basis upon which to rear a superstructure of therapeutics uniform and complete in its application. On the theory that the descending current lessens irritation it is logical to employ this method in spinal irritation, and practical experience confirms its propriety. I have had occasion in many cases to test its superiority over the opposite method. In regard to special methods of galvanization of the cord in spinal congestion I can not speak with the same confidence, although, on general principles, I am in favor of ascending currents; but, at the risk of being thought unphysiological, I do not hesitate to declare that general faradization is, as a rule, more efficient in the treatment of spinal congestion than direct galvanization, and that in irritation it can almost always be alternated with the descending galvanic current, and with the best results.

The question very naturally and properly arises, what is the measure of benefit to be derived from the use of central galvanization and other methods of electrization in organic diseases of the brain and spinal cord?

One-sided paralysis from cerebral effusion, paraplegia dependent on spinal apoplexy, softening of the brain, palsy agitans, progressive locomotor ataxy (spinal sclerosis), progressive muscular atrophy, and kindred affections have ever been regarded as the *opprobria medicorum*.

While no sane man would presume to triumphantly proclaim a method or a remedy as a panacea for these fearful diseases, it can yet be confidently asserted that in some one or more of the various forms of electrization we have under control a potent means by which the symptoms of these diseases may almost always be relieved, and occasionally approximate recoveries follow.

In the treatment of these various affections both the

galvanic and faradic currents are, as a rule, indicated, although the prominence which is to be given to either current or to any method depends on the character of each individual case. In hemiplegia, for example, it was formerly thought useless and even unsafe to apply electricity until some months after the attack. It is now used almost immediately and with favorable results.

By localized faradization the tendency to muscular atrophy is undoubtedly resisted, and even after atrophy has taken place in the limbs it is no uncommon thing to see the parts develop with rapidity under the mechanical action of the current.

By general faradization the nutrition, if impaired, is improved; and by galvanization of the brain the process of absorption is hastened. Of all the cases of hemiplegia that have come under my observation the treatment has resulted most favorably, and the results have been most permanent where the patient was seen and submitted to treatment within a comparatively short time subsequent to the attack.

Paraplegia of a reflex character is, of course, amenable to treatment in a far greater degree than when dependent on effusion within the cord; and yet in this last condition galvanization of the cord, with faradization of the lower limbs, is generally indicated, and is often of infinite service. Of above a dozen cases of softening of the brain that have been under my care, and that I have treated more or less persistently, not one has improved in any marked degree, and in but two or three were the symptoms even slightly alleviated.

Palsy agitans offers a somewhat more satisfactory field for electrical treatment. The faradic current, in whatever manner used, seems to possess but little influence over the disease.

The most thorough form of central galvanization, however, exercises very frequently a controlling power over the constant agitation that is most grateful to the patient. It can hardly be said that I have knowledge of an effectual cure

wrought in this disease by any method of treatment, but in two cases certainly central galvanization has been followed by approximate and apparently permanent relief.

In locomotor ataxy electrization is unquestionably the remedy *par excellence*, and the only one, in fact, to which we can look with any degree of confidence in the consideration of its therapeutics. The experience and observation of the most able German electro-therapeutists prove that this progressive disease may not only at times be arrested in its course, but most markedly relieved in every symptom. With these observations my own fully accord.

The same encouragement is afforded in the consideration of progressive muscular atrophy, a disease hardly less frequent and certain in its progress than ataxy.

NEW YORK.

COCCYODYNIA, WITH A CASE.

BY JOHN O'REILLY, M. D.

Coccyodynia was first described by Dr. Nott, of Alabama, in 1844. Since that time numerous cases have been placed on record by different practitioners. The literature on the subject is, however, very scant, a great many authors on diseases of women making no mention of it. The cases published are only those of the most severe type, and such as always required surgical aid before relief was obtained. We believe, however, that there is a more frequent form of sub-acute or chronic coccyodynia that is entirely overlooked, being referred, among other symptoms of pelvic neuralgia or myalgia, to uterine trouble.

Mrs. M., a married woman, aged thirty years, of good constitution, was confined June, 1865. She had a long, lingering labor, having suffered with inefficient pains for forty-

eight hours before she was delivered with the forceps. From this time forward she always complained of soreness along the lower part of the spine, a tired feeling on the least exertion, with a more or less general discomfort about the pelvic region. In the latter part of 1867 this lady came under my care. She was suffering with vaginal leucorrhœa, but an examination of the womb revealed no disease of that organ. The uneasiness about the back and loins, with pain at the coccyx, was becoming more severe, and occasionally she would apply for relief for these symptoms. The leucorrhœa disappeared, but the bearing-down sensation about the womb and rectum—or a general fullness, as if something was passing out—was not diminished to any considerable extent. This state of things kept up until May, 1869. About this time she fell going down stairs and struck on the sacro-coccygeal region. For some days she experienced but little more soreness than usual. About the first of July, however, she was confined to her bed with an excruciating pain at the extreme end of the spine, and from that time until the middle of September she passed through such an ordeal of suffering as I have never seen in any other disease. On examination the slightest pressure of the finger over the coccyx was perfectly unbearable. She would scream when moved the least bit. An action on the bowels or evacuation of the bladder was, to use her own words, “like striking a knife in her heart.” She lay as helpless as an infant, and if the house had been on fire she could not have moved to save herself. This is no exaggeration of her suffering, nor was she a weak-minded, hysterical woman, that gave way to a little pain; on the contrary, she was a patient of more than ordinary nerve.

All that could be devised by the best medical counsel was done, but to no purpose. Her suffering had brought her to death's door. About the first of September Dr. Ireland severed the coccyx from its muscular attachments. The effect was surprising. One that has not seen such a case

will scarcely believe it. This haggard, emaciated woman was well in forty-eight hours. This patient from months of torture passed to perfect ease, and that in two days. The moment *muscular tension* on the coccyx ceased the whole difficulty was relieved, the pain ceased, and the patient was, in a word, well. Time and good diet soon restored her general health. I do not mention the special medical treatment in this case, because it would only be tedious to relate, and of no special benefit, as it was all without avail.

A short time after her recovery Mrs. M. moved to New Orleans. There she led a very active life. Some months after her removal she was taken, to use her own language, "with pain in my womb, also excruciating pain in the extreme end of my spine. A pain extended from my womb up over my left hip, and from my back through the under part of my thigh to the knee. I suffered with continual pain in my hip, knee, and back, and my leg kept shortening all the time. The muscles finally became so hard and contracted that I could not straighten my leg at all, but kept it crooked up under me." During this time, as I afterward ascertained, she had had a very severe attack of endometritis with extensive ulceration of the os, and while under treatment the contraction of the limb commenced.

July 8, 1872, Mrs. M. returned to Louisville. She was using crutches, the leg being contracted almost to a right angle with the thigh, and the hip-joint immovable. Around the hip were the signs of all forms of counter-irritation which had been used for the purpose of relieving some supposed disease of the joint. Examining her a few days after her arrival, I found still some endometritis, soreness around the muscular structures of the hip, but pressure on the joint from the knee did not increase it. She complained of great pain over the coccyx and soreness of the perinæum, and could not sit on any hard substance, always carrying a pillow to rest on. Believing that the contraction of the leg did not

depend on disease of the hip, and judging from the increasing trouble about the coccyx that it was but a complication of the returning coccydynia, I consulted Prof. D. W. Yandell about the case. He confirmed my views.

About the first of July, having chloroformed our patient for a more thorough examination, we were surprised to find the limb gradually lengthen itself out; but as the effect of the anæsthetic wore off it contracted as permanently as ever. This proved at once that the contraction was due to some nerve disturbance and not to disease about the hip. We had constructed an iron angular splint, which could be extended by means of a sliding screw. This being well padded and fitted to the under surface of the thigh and leg, the limb was straightened daily a little. By this means Mrs. M. was enabled to throw away her crutches in a couple of months. The coccydynia, however, was not much better, but as our patient was so much relieved otherwise she returned south.

I heard no more from Mrs. M. until July, 1873, when I was called to see her in this city, and learned the following history. In the past spring the pain in the coccyx and womb became so intense that she was confined to her bed. The ulceration of the womb was so severe that some pronounced it malignant. While, however, her physician treated the uterine disease and relieved it to a great extent, he maintained that the intense pelvic and spinal pain depended on the womb disease, and would only disappear with it. In the mean time so great was the prostration produced that her medical advisers pronounced her case hopeless, and she was placed in a sleeping-coach at New Orleans with the hope that she might reach home alive, but only to die. In this condition Dr. D. W. Yandell saw her with me soon after her arrival. The conclusion arrived at was that the coccydynia was killing her, and that the coccyx must be removed. After a few days' supportive treatment Dr. Yandell removed the bone, and with its removal, as by magic, the pain and suffering of Mrs. M.

disappeared. It is true the endometritis remained, and from it, as well as the great prostration of her system, she was some months rallying, but her improvement commenced from the moment of the operation. Mrs. M., writing February 1, 1874, says, "I am a well woman. I can straighten myself out at full length and lie flat on my back, which is something I have not done for five years. There is still some little discharge from the wound." *

Such then is the ending of this case of coccydynia. It is certain from the treatment at different times that this prolonged case of suffering was due to inflammation of the coccyx and its muscular and ligamentous attachments. When these parts are very sensitive it is impossible to get up or sit down—in fact, perform any motion—without pain. We believe a great many cases of pelvic weakness, accompanied by soreness across the sacrum, and which pass for symptoms of irritable uterus, are due to more or less irritation of these parts.

One point I wish to show from the clinical history of this case is that an assemblage of symptoms which authors attribute solely to irritable and other conditions of the uterus do not depend exclusively on such morbid states, though they may co-exist with them. My reason for this is that the limiting of these symptoms to pathological conditions of the uterus prevents the practitioner from seeking the cause elsewhere, and leads to much of our unsuccessful medication. Hodge, under the head of irritable uterus, condenses many of them in the following language: "The kind of pain varies indefinitely, and various expressions are employed to give an idea of its character. Perhaps most frequently it is described as a dull, aching, weary feeling in the back, with more or less of a sense of pressure, weight, etc." "A bearing-down sensation in the back, abdomen, thighs, in the lower part of the pelvis, in the bladder, vagina, and rectum; an open feeling as

* May 15th: The wound has entirely healed; general health excellent; is in full flesh, weighing one hundred and thirty pounds.

as if there was no support and all the pelvic contents must escape, or as if the patient must 'fall to pieces' when in the erect position; a sense of pressure on the rectum, as if the bowels must be moved, or simulating the fullness and weight of hemorrhoidal tumors."

All these feelings were complained of by Mrs. M., and several practitioners who saw her attributed them to the condition of the womb, but all their medication of that organ failed to relieve them. The removal of the coccyx, however, not only relieved the coccydynia, but also the symptoms of pelvic muscular neuralgia mentioned by Hodge as having their origin in uterine trouble. This operation shows that these sensations, though co-existent with a diseased uterus, did not depend on it. In this case they were relieved by the removal of a diseased bone, although the womb was still considerably enlarged and suffering from chronic endometritis. If morbid effects are only relieved by eradicating the cause, then in this instance the cause was the coccyx and not the uterus. Such being the case, should we not infer that the group of symptoms daily complained of by females is often caused by some morbid condition existing in the pelvic, muscular, and nervous structures themselves, and not in the womb.

This fact being established, a change should be made in the direction of our medication. In place of trying to relieve these ailments by pessaries, tents, and sounds, we would find much better results from the administration of muscular and nerve tonics when they are the effect of debility, or by the removal of such other causes as they may depend on. That there are many other causes there can be no doubt. Does it seem unreasonable that irritation of the sacral plexus, or troubles of a rheumatic or neuralgic character existing in the levator ani, sphincter ani, coccygeal and other pelvic muscles which resist the expulsive efforts and support the pelvic contents, should give rise to those feelings which our female

patients are wont to attribute to the womb? Nor is it strange that when arising from such causes they should be relieved sooner by quinine, strychnine, iron, pepsin, and general treatment than by supporters and pessaries? Many facts tend to show that these symptoms depend on the diseased conditions just mentioned, as well as that they do not always accompany a diseased uterus. We find them in females perfectly free from uterine trouble—young anæmic women, who suffer from chronic constipation, and whose employment requires them to be seated or standing many hours together in close apartments. We find them in overworked child-bearing women, who before one child is weaned are carrying another. Surely this class of patients can not have irritable wombs, or they would abort instead of going to full term. On the other hand, many persons suffering from leucorrhœa, dysmenorrhœa, and menorrhagia do not present them at all. The worst cases of dysmenorrhœa that ever came under my notice—those accompanied monthly by general muscular spasm and great nervous prostration—were not attended either at the period or during the intermission with these miserable “giving-way, bearing-down feelings, irritation of the rectum,” etc. Surely these wombs were irritable. In fact, this muscular uneasiness and weakness is felt where there is no womb. Men sometimes complain of it. I remember once having heard an eminent physician, when recovering from prolonged illness and trying to describe his feelings, say that he felt just like a woman that had falling of the womb. It is hardly probable that this suffering in structures which nature intends to pass through the hardships of labor should be caused by an irritable uterus. These symptoms are the result in females of the following causes, irrespective of the state of the uterus: general muscular and nervous debility, with local neuralgia, or rheumatic trouble in the unmarried, and the effect of labor on the muscular and nerve structures of the pelvis in child-bearing women.

Such being the case, had not this assemblage of symptoms better be classed under the head of "pelvic myalgia" instead of morbid conditions of the uterus? Arranged under such a heading we will, when they are complained of, examine all the structures of the pelvis before locating their origin. We once knew a patient who, complaining of these symptoms, was treated by a prominent practitioner for months for uterine disease, when passing into other hands she was relieved entirely by being cured of strictured rectum. Had this patient been thoroughly examined, the proper cause would have been discovered at first. So in other cases the location will be found in the different pelvic structures, and frequently, as in Mrs. M., in the coccyx or its attachments.

LOUISVILLE.

IS LABOR PROTRACTED BY EARLY SPONTANEOUS RUPTURE OF THE MEMBRANES?

BY G. W. H. KEMPER, M. D.

The above question is, I believe, answered affirmatively by all our text-books, and the student goes from his books to the bedside impressed with this idea. The most recent obstetric authority, Leishman, thus unqualifiedly expresses himself as to the effect of early rupture of the membranes (Obstetrics, p. 255): "And the result when that occurs is, as every one knows, protracted labor and increased risk to the child." I well remember my own anxiety attending my first case of "dry labor." A larger experience and careful observation have led me to believe that the statement we have quoted is not to be received as absolute truth. This belief has been confirmed by reading the following extract from the Obstetrical Journal of Great Britain and Ireland, December,

1873, p. 629: "Having described the functions of the bag of waters, Dr. Gartipny proves, by the notes of two thousand deliveries, that its spontaneous rupture is of frequent occurrence. The premature flow of the waters hastens the labor, and exercises no injurious influence on the mother or child. Its occurrence is therefore favorable when pregnancy has arrived at its full term."

I offer the following statistics from my practice showing the duration of labor and the results to the mother and child:

| Cases..... | Age..... | No. of labors..... | Result to mother. | Result to child... | From rupture of membranes to beginning of pains.. | Duration of labor from beginning of pains..... |
|------------|----------|--------------------|-------------------|--------------------|---|--|
| 1 | 15 | Primipara | Did well... | Did well... | 4 hours..... | 10 $\frac{1}{4}$ hours. |
| 2 | 20 | " | " ... | " ... | 20 $\frac{3}{4}$ hours..... | 6 " |
| 3 | 25 | Multipara | " ... | " ... | At once..... | 2 $\frac{3}{4}$ " |
| 4 | 20 | Primipara | " ... | " ... | " | 10 $\frac{1}{2}$ " |
| 5 | 41 | Multipara | " ... | " ... | " | 20 " |
| 6 | 28 | " | " ... | " ... | " | 5 " |
| 7 | 30 | " | " ... | " ... | 2 days..... | 5 $\frac{1}{2}$ " |
| 8 | 33 | " | " .. | " ... | At once..... | 6 $\frac{1}{2}$ " |
| 9 | 21 | Primipara | " ... | " ... | " | 7 $\frac{1}{2}$ " |
| 10 | 19 | " | " ... | " ... | " | 7 " |

These ten cases occurred in my first two hundred recorded cases, showing an average of this accident once in twenty cases. The ages ranged from fifteen to forty-one years; five were primiparæ and the remaining five multiparæ. As regards the results to the mothers, all did well, convalescing rapidly. In every case the child was born alive. Pains supervened in seven immediately upon the rupture of the membranes, and in three not until after an interval, one delaying two days. The entire length of time of the ten labors was eighty-one hours, averaging eight hours and six minutes to each case; or in respect to multiplicity of labors, the average was seven hours and fifty-seven minutes for the multiparous, and eight hours and fifteen minutes for the primiparous cases.

CYSTICERCUS IN THE PUPILLARY EDGE OF THE IRIS.

BY D. S. REYNOLDS, M. D.

Mrs. C., of Simpsonville, Ky., was sent to me by my friend, Dr. W. E. Ryon, with a very painful affection of the left eye. The trouble had existed for some time, but not until the last two weeks had she suffered much pain or had vision become obscured. She could not at this time tell positively that she saw the flame reflected directly into the eye by the ophthalmoscopic mirror. There was great tenderness of the eyeball, though only a very low grade of iritis existed. The pupil opened well under the influence of atropia, except at the inferior and external portion, where there was a white opaque pear-shaped tumor, the small end of which rested upon and was adherent to the capsule of the lens. I could see nothing with the ophthalmoscope beyond the hazy lens-capsule.

At noon of the same day I removed that portion of the iris containing the cyst; but the cyst itself was so firmly adherent to the lens-capsule that it was necessary to seize it with forceps, and by careful traction made in the same plane with the lens-surface to detach and remove it. I succeeded in doing so without rupturing the capsule of the crystalline. The wet compressive bandage was applied and the patient put to bed.

At 7 P. M., patient complaining of headache and discomfort about the eye, I gave hypodermically one fourth grain of morphia and one sixtieth grain of atropia, and injected between the lids a four-grain solution of atropia, and left her quite comfortable.

11 A. M.: Patient has had no pain; says she had little rest; is thirsty; skin hot and dry; pulse 100; tongue dry and brownish. Ordered five grains each of calomel and chlorate of potash.

12 M. next day: Mrs. C. had rested well; is comfortable; has taken a small quantity of food. On removing the dressing the wound of the clear cornea was found well united, pupillary space clear, and she could count fingers at the distance of two feet with the sound eye closed. Her health and vision now rapidly improved.

The cysticercus when placed under the microscope showed three suckers and a beautiful circle of hooklets. The head and a portion of the neck was all that I succeeded in preserving for minute inspection.

The very rapid abatement of all signs of irritation in the eye, with the almost sudden restoration of vision, gives to the case all its remarkable features, and at the same time affords an adequate apology for my reporting it.

LOUISVILLE.

INTRA-UTERINE TREATMENT IN ENDOMETRITIS AND MENORRHAGIA WITH PURE NITRIC ACID.

BY A. C. HAYNES, M. D.

As a rule, in all chronic cases of intra-uterine disease a permanent cure is hopeless by any means which do not act directly upon the diseased surfaces—viz., the mucous membrane lining the uterus and cervical canal—this endocervicitis or endometritis being often associated with hypertrophy, congestion, granulations, etc. To accomplish this local medication two methods are used—injections and swabbings. The first is generally condemned as dangerous, nearly all writers having reported cases of death resulting from intra-uterine injections, and they are seldom resorted to unless in cases of urgent danger from menorrhagia or metrorrhagia.

The substances most commonly used by means of swab-

bing are sulphate of zinc, carbolic acid, chromic acid, nitric acid, iodine, nitrate of silver, perchloride and persulphate of iron.

Dr. Barnes uses sulphate of zinc perhaps more than any other one remedy; Dr. Playfair carbolic acid; Drs. Nott and Whitehead iodine; Dr. Lombe Atthill, of Dublin, undiluted nitric acid. The most common way of making these applications is by means of a fine probe of whalebone, round which a thin film of cotton-wool is wrapped. This is saturated in the solution to be used, and then the application can readily be made to the interior of the uterus without pain or danger. It is generally advisable to have the cervical canal well dilated, though some authors do not think this always necessary. I frequently fasten a fine piece of sponge round the end of a probe and dip this into nitric acid, and then apply it freely to the interior of the uterus. In all the cases in which I have pursued this plan of treatment the greatest benefit has resulted. Great judgment should be used in selecting cases, and where there is much uterine tenderness intra-uterine treatment should be postponed until this has been diminished; but, a proper selection made, the nitric-acid treatment is quite safe. Before applying the medicine it is advisable to clean the parts of their contents; for if this should be neglected they will materially interfere with the beneficial effects of the remedy, neutralizing it to a greater or less degree.

Stillé mentions cases where pieces of lunar caustic have been swallowed without serious injury. Tyler Smith says that leucorrhœal discharges, coagulated by injections, may remain in the vagina for days, and then come away in an egg-shaped mass. If this can take place in the vagina, it is much more likely to occur in the uterus, since it has a much smaller outlet.

The discrepancies which exist among gynecologists regarding the value of various uterine remedies may be explained

from the fact of inert chemical compounds formed between the materials introduced and the fluids found in the uterus.

The following cases are selected, not because they present any unusual features, but because each of them had been vigorously treated for lengthened periods by the methods usually employed, and without any permanent relief, while they were rapidly cured as soon as the true seat of disease was attacked with nitric acid.

CASE I. A woman, twenty-four years of age, had suffered with uterine trouble for five years. On examination the uterus was found to be large and heavy, the os patulous and gaping. On the 19th of August, 1873, I inserted a sponge-tent, and on the 20th, upon its removal, applied the fuming nitric acid to the whole interior of the uterus and cervical canal without causing the least pain. In order to make a thorough cauterization I applied the acid a second time. About one month after this I repeated the operation. This patient was under my care about six weeks. I applied nitric acid twice. The symptoms all improved from the first application. I have frequently seen her since and she enjoys excellent health, and is now (April, 1874) about six months pregnant.

CASE II. A woman, twenty-three years of age, has suffered from profuse menorrhagia for some time, with ulceration and abrasion of the os and cervix, and is quite debilitated from the loss of blood. It was with some difficulty that the os was found, it was so jagged and torn. It bled freely on being touched. I inserted a sponge-tent in the morning, removing it in the evening, and applied nitric acid freely to the os and about two thirds the length of the cervical canal. The application produced no pain. This woman has passed three menstrual periods since the operation, each period being but three or four days, and the flow normal and without pain, though previously from ten to twelve days in duration and attended with severe suffering. I made but one application, and the patient is quite well.

I could report a number of similar cases, the results being equally satisfactory, but it would seem too much like repeating what I have already written.

OWENSBORO, KY.

PUERPERAL CONVULSIONS.

BY J. J. ELAN, M. D.

January 4, 1872, at 8 P. M., was called to see A. B., aged eighteen years, primipara, at full term. Found labor progressing favorably; os dilated to the size of a crown; patient in good spirits. 9:30 P. M.: complained of a very slight frontal pain; labor making rapid progress. Gave thirty grains of chloral hydrate, and at 10 P. M. delivered her of a healthy male child weighing nine pounds. Patient fell asleep immediately after delivery, with all promising well.

At 10:30 P. M., while congratulating myself over her quick and easy labor, I was surprised to find my patient seized with a most violent convulsion and with an expression scarcely human. I immediately corded her left arm and freely opened the median vein, but could only get about one ounce of very black, thick blood; opened the temporal artery on the left side, from which about two drachms of blood came; corded the right arm and opened the median vein, from which about half an ounce of blood came; opened the veins of the foot, from which only a few jets came.

She had eight severe convulsions in two hours, although I had repeated the chloral, with the addition of tincture of veratrum and gelseminum, and they were finally mitigated—not prevented—by chloroform, administered freely. She has flooded a little since her second convulsion. At 12:30 A. M.

I introduced my hand into the uterus, and finding the placenta adherent I detached it with some difficulty. The uterus contracted well.

I A. M.: convulsions continue every fifteen minutes; pulse 130. Gave the following:

R. Potass. bromid., ʒ ij;
 Tinct. cannabis ind., ʒ ss;
 Tinct. gelsemini, gtt x;
 Tinct. verat. viride, gtt x;
 Aquæ, ʒ ij.
 M. ft. haustus.

To be taken every two hours; ordered jugs of hot water to feet and hips, and kept her under the influence of chloroform, by which means the paroxysms were warded off for forty minutes, the longest period.

At 1:30 A. M., in consultation with Dr. Wallace, we applied cut-cups to the temples, but got only about half a drachm of blood. Patient conscious between the attacks, and calls for the handkerchief (wanting chloroform), but before it could be given her she would be convulsed; pulse 140; gave twenty grains calomel and applied cold water to the head.

3:30 A. M.: convulsions recurred at intervals of fifteen minutes, notwithstanding the means resorted to. Seeing that our patient must soon die if not relieved—her pulse being now 145, small and tremulous—I suggested to Dr. Wallace the application of *fire* as the *dernier ressort*, being satisfied that I had once before in a similar attack saved her life by the use of fire when all other remedies had failed to bring on reaction.

Dr. Wallace fully agreeing with me, a *coal of fire* was procured—the patient being at the time in a severe convulsion—and passed rapidly over the chest, making a series of small blisters, the largest over the region of the heart. Reaction came on immediately, and the jaws, previously clenched, now moved freely, and the patient exclaimed, “Quit burning me!”

The pulse immediately became fuller and stronger and the breathing less labored. Fifteen minutes after applying the fire strong symptoms of recurring convulsions; administered chloroform; ceased in about two minutes; patient slept; pulse 130. Thirty minutes after had slight symptoms of convulsion; ordered jugs of hot water and chloroform; patient went to sleep. Roused up in two hours with no symptoms of convulsions; pulse 78, full and strong.

2:45 P. M.: patient has rested quietly, but the symptoms are not so favorable, pulse being 100 and corded.

3:15 P. M.: eleven hours and forty minutes since applying the fire; patient called for the handkerchief (wanting chloroform), but before I could administer it she was convulsed, though the paroxysm was immediately cut short; pulse 100.

At 5 P. M. patient awoke, took fifteen grains chloral hydrate, and went immediately to sleep.

7:30 P. M.: still asleep; no return of convulsions; pulse normal; ordered enemata.

January 6th, 1:30 A. M.: patient roused up; bowels acted three times; no bad symptoms; has had six or eight hours of refreshing sleep; feels much better; pulse 85.

10 P. M.: has been awake three hours; no more convulsions; pulse 80, full and regular; gave the following:

| | | |
|------------------------|-------|-------|
| R. Hoffman's anodyne, | . . . | ℥ j; |
| Spirits nitrici dulc., | . . . | ℥ ij; |
| Spirits mindereri, | . . . | ℥ ij; |
| Flu. ext. gelsem., | . . . | ℥ ij. |

M. S. One tea-spoonful every two hours in a wine-glass of water.

January 7th found patient doing well, having had no return of convulsions. She now made a rapid recovery. I regret that her urine was not examined.

The points worthy of special consideration in the foregoing case are:

1. The influence exerted over the circulatory and muscular systems by fire, as manifested by the increase in the volume

and reduction in the frequency of the pulse, and the relaxation of the jaws previously locked.

2. The power of chloroform to cut short but not prevent the recurrence of the convulsions.

3. The action of chloral hydrate as a hypnotic. The action of fire I consider of the first importance, from the fact that chloroform, chloral, etc., though carefully and persistently employed, had failed. Will the editors of the *American Practitioner* please give an expression of opinion on the subject?

MASON, TENN.

AN ABSTRACT OF SIX CASES OF OVARIOTOMY.*

BY D. W. YANDELL, M. D.

My purpose in the present paper is simply to group such features of the several cases I am about to report as possess some special interest. The patients operated upon were aged respectively twenty-two, twenty-seven, thirty-one, thirty-three, forty-four, and sixty-five years. Three were residents of Louisville, one was of Texas, one of Glasgow, Ky., and one of Illinois. One was single, but has since married and borne two children; another, though married ten years, was childless; the other three were mothers of several children. Four of the six women were of unexceptionable constitution. The patient who was married but childless was of phthisical descent; had lost two brothers with pulmonary consumption; was thin, feeble, a non-consumer of fats, but without physical evidence of tubercles. The unmarried patient was extremely delicate, but without appreciable organic disease.

*Read before the Kentucky State Medical Society at its annual meeting, April, 1874.

In one patient the tumor was discovered eight years before the operation; in another five years; in another three; while in the remaining three it was discovered but two years before. In four of the cases nothing unusual occurred from the time the tumor was discovered until it was removed. In one, while on the commode and pressing the abdomen with her hands, a sudden giving-way was experienced, and the parts, which had been hard and unyielding, became soft. For a moment she seemed relieved. In a little while, however, she had orthopnœa, passed into collapse, and death seemed imminent. After being in this condition for about fifteen hours she was tapped by the physician who saw her in consultation, and about twelve pints of serous fluid evacuated through an opening made below the umbilicus and a little to the left of the mesian line. The relief was immediate. Indeed she grew perceptibly more comfortable while the fluid was flowing. The whole train of urgent symptoms instantly disappeared; the patient passed into quiet sleep, from which she awoke easy and refreshed. In three weeks after the operation she traveled from her home to Louisville, a distance of a hundred miles.

I removed a multilocular cyst of the right ovary from this patient the 3d of July, 1873. One portion of the cyst contained twenty-two pounds of dark grumous fluid, which escaped readily through the canula. The remaining portion of the tumor was composed of colloid material, distributed in lesser cysts, and of about the consistency of calf's-foot jelly. The contents of the tumor weighed twenty-eight pounds. The tumor, with a portion of the colloid mass remaining, weighed eleven pounds. The only noticeable adhesions were to the diaphragm and liver. These were sufficiently firm to require time and patience for their separation. The patient rallied fairly, and continued for two days reasonably well. At the end of this time vomiting set in and continued well-nigh incessantly for nine days, resisting every

means attempted for its control. Life was sustained during this dreary period by nutritive enemata. On the second day of the vomiting—the fourth day after the operation—there was marked abdominal tenderness, while a considerable gush of reddish serum from the lower angle of the wound followed each act of vomiting. The pulse rose to 130 and the temperature to 104°. I now began the use of intra-peritoneal injections after the manner recommended by Dr. Peaslee, and made them from three to six times in the twenty-four hours during the greater part of a month. If at any time the injections were omitted for more than six hours, the temperature would rise from three to six degrees. The fluid used for injection consisted of a very weak solution of permanganate of potash and carbolic acid. When the vomiting ceased the patient was put upon quinine and iron, and made a good recovery, returning home in nine weeks after the operation. Her health has steadily improved, and recent letters from her state that it is better than it had been at any other period of her history.

The second case presents the following interesting history in connection with the treatment of the tumor. Nearly nine years ago she first detected a tumor, about the size of a goose-egg, in the region of the right ovary. During five years its growth was so slow as scarcely to attract her attention. About that time it began to enlarge, and she had treatment for it. Many were the doctors consulted and the remedies used.

Throughout all this period the tumor remained movable. She could float it about in the abdominal cavity with her hand. She now went under the care of a traveling electrician, who undertook to disperse the tumor with his battery, following each sitting by the application to the os uteri of the solid nitrate of silver. The patient represents the treatment as having been painful beyond any language to describe it;

but, being a woman of extraordinary heroism, she submitted to it for several months. On more than one occasion the pain was so overwhelming that she well-nigh fainted, while the tenderness and suffering frequently continued for days after the use of the battery.

I operated on this patient on the 4th of March last, emptying a unilocular cyst of thirty-seven pounds of purulent fluid. The cyst itself was adherent to the abdominal walls, to the bladder, and to almost the entire rim of the pelvis. No effort that I thought proper to make enabled me to separate the adhesions, except over a small space on the right side midway between the umbilicus and the pubis, and this to an extent barely sufficient to expose the intestines. In carrying my hand into the cyst I found that its anterior wall was firmly adherent so far above the umbilicus that I did not deem it expedient to try, by enlarging the original incision, to get above its superior attachments, though this I should have done but for the deeper-seated adhesions. I did attempt to peel the cyst from the peritonæum, as has been done so beautifully by Dr. W. L. Atlee, but failed. I excised a small portion of the cyst, closed the wound, introduced into the cyst a large drainage-tube, and endeavored, as in Ledran's operation, to keep the cyst open, and finally effect its obliteration under drainage and inflammation. The patient rallied well, and on the eleventh day was sitting up. Very large quantities of purulent fluid escaped daily through the tube. Injections of carbolated water were made morning and evening into the cyst. The tube was withdrawn occasionally, cleansed, and returned. On the fourteenth day the patient was walking about her room. On the sixteenth day the tube escaped from its place, and could not be returned by the nurse. Being absent from the city at the time, I found at the expiration of twenty-four hours that the opening had closed. I hoped, though clearly against hope, that the cyst would be obliterated. At the end of a week, however, I found I was mistaken.

It had begun to refill. The patient had two sharp attacks of abdominal pain, with a sense of sinking, but without elevation of temperature or change of pulse. The tumor continued rapidly to enlarge, and on Saturday, the 4th of April, I withdrew by trocar and canula twelve pounds of fluid; the first of which was albuminous, the latter purulent. The patient experienced great relief from the operation, slept in comfort, and is again able to move about her room. Should the tumor refill—which in the nature of things it will almost surely do—I shall practice iodic injections with the view of closing, if possible, such portion of the growth as can collapse, and then open the remainder of the cyst through the roof of the vagina, as practiced so successfully by Dr. Noeggerath, of New York.*

Two of the six patients operated on have died: one on the sixth day, from general peritonitis; the other on the eighth day, from intestinal obstruction. In the latter instance—my fifth case—the pedicle was so short and the abdominal walls so thick that I deemed it best not to treat the pedicle externally, as I had done in my previous operations; but, after securing it, dropped it back into the abdominal cavity. There was not an untoward symptom in her case until the night of the fourth day, when tympanites and occasional vomiting of a dark-greenish fluid set in. The pulse and temperature remained unchanged. Dr. Hewitt, who saw the case with me the next day, pronounced it one of intestinal obstruction, and advised opium, belladonna, the rectal tube, and large warm-water enemata. The abdominal distension becoming enormous, the aspirator was used, but failed to give relief. The patient died on the morning of the eighth day. The autopsy (made by Dr. Roberts and one of my clinical assistants, Mr., now Dr., Splawn, of Louisiana) revealed the abdominal incision firmly united throughout its entire extent.

*American Journal of Obstetrics, May, 1869.

There was neither fluid in the peritoneal cavity nor signs of inflammation; but the pedicle lay full against the ilio-cæcal valve, and by an abundant exudation of plastic lymph, firmly organized, had completely occluded this portion of the intestines. But for this untoward event there can be no doubt that this patient, the oldest but perhaps the stoutest of the series, would have made a perfect recovery.

In three of the patients the incision was six inches long. In one, which terminated fatally by peritonitis, it was but four inches long. In two it was necessary to make the larger incision. In one of these, my first, the incision reached from the ensiform cartilage to the pubis. In four cases the pedicle was treated by what is known as Mr. Clay's method; that is, externally. In one it was dropped into the abdominal cavity. The other was an incomplete operation.

The weights of the several tumors removed were as follows: eighty-four pounds, sixty pounds, fifty-eight pounds, forty-two pounds, thirty-nine pounds. Five of the tumors were polycysts, one only being monocystic. Four of my patients lived and two died.

The entire series was operated on at St. Joseph's Infirmary, Louisville; and whatever success has been realized, much of it is due to the intelligent attentions of Sister Maud, the nurse, whose sleepless and unfailing kindness was bestowed upon them all. The first operation was done in May, 1870. The remaining five have been performed within the past eight months. The several operations were witnessed by Drs. Lewis and Coleman Rogers, Dr. Roberts, Drs. Owen and Mills, Dr. Ely McClellan, Dr. T. S. Bell, Dr. R. Brandeis, and Dr. Donhoff, to all of whom I wish here publicly to express my obligations.

LOUISVILLE.

Reviews.

A Clinical History of the Medical and Surgical Diseases of Women. By ROBERT BARNES, M.D., etc. Philadelphia: Henry C. Lea. 1874.

This is a reprint, by the leading medical publisher of the United States, of a treatise issued a few months ago in London, and from one of the greatest of living teachers in obstetrics and diseases of women. Dr. Barnes's *Obstetric Operations*, the first edition of which was issued about four years ago, has been very favorably received by the profession in Great Britain and in this country; but, if we are not much mistaken, this last work is destined to a wider fame and a larger circulation. The problems in uterine therapeutics—at least medical therapeutics—are so many, and of these many not a few very far from satisfactory solution, that the ardent student will hail with pleasure a work that is rich with the experience of one of the best of observers and most philosophic of teachers.

The volume contains fifty-two chapters, the first sixteen being occupied with topics relating to diagnosis. The seventeenth chapter includes *menstruation and its disorders*, while the *last* is devoted to *diseases of the vulva*; thus making quite an innovation upon the order usually pursued by writers of treatises upon diseases of women. This innovation is wise, philosophic; for certainly the internal organ of generation ranks far higher in function than the external, and the consideration of the maladies of the former—more frequent, more complicated, more important—should precede that of the latter.

We do not regard Dr. Barnes as a perfect teacher. The time has not yet come—nay, it is far away—for any one to place the topmost stone upon the completed edifice of gynecological science. We differ with him in some of his instructions. Nevertheless, we do not know a better work in the English language on diseases of women.

His discussion of *peri-metric inflammation* seems to us to fall below not only the needs of the practitioner, but below the actual condition of the abundant literature of the subject. Especially is that portion devoted to the therapeutics of this disorder remarkably defective. On the other hand, *hematocoele* is very fully considered. Indeed more pages devoted to this disorder, which, while not uncommon and by no means unimportant, than to the one previously referred to, which is one of the most frequent of the maladies of women. However, we have not time even to present an analysis of this volume and a discussion of some of its prominent topics. Elsewhere* we have done this, and we do not care to travel the same ground and repeat a labor already accomplished. We can conscientiously and cordially recommend "Barnes" to every physician interested in the study of diseases of women.

T. P.

A Treatise on Diseases of the Eye. By Dr. CARL STELLWAG (VON CARION), Professor of Ophthalmology in the Imperial Royal University of Vienna. Translated from the fourth German edition by D. B. ST. JOHN ROOSA, M. D., CHAS. S. BULL, M. D., and CHAS. E. HACKLEY, M. D. New York: Wm. Wood & Co. 1873.

The fact that this work has passed through four German editions within ten years is in itself conclusive evidence of its excellence, for our Teutonic brethren are not very apt to call

*American Journal of the Medical Sciences, April, 1874.

for a work which is not up to date in all its parts. Prof. S. himself occupies a leading position in ophthalmic science, and next to Donders, and since the death of the lamented Graefe, may be considered as the first authority on the subject. If Stellwag errs at all, it is in his excessive depth and prolixity, which is sometimes so marked that it is almost impossible to arrive at his meaning. Some sections of his work are written in such an abstruse vein that a paragraph must be read and reread time and again before its true meaning can be discovered.

We are glad to see that the American editors have judiciously omitted the diatribe directed against Donders, which was published as preface to the third German edition, and in which Stellwag laid claim to priority in the establishment of the fundamental truths bearing on accommodation and refraction. We feel no hesitancy in declaring that S. enunciated these theories as long ago as 1855. The fact is that Stellwag has fallen an easy prey to others, who did not hesitate to appropriate the results of his original investigations and palm them off as their own.

The latest investigations in ophthalmology have been collated and inserted in their proper place, so that there is hardly any thing of note which can not be found in the work before us. We think, however, the work would be improved if in the next edition mention was made of several congenital affections which hitherto have been purposely ignored. We are clearly of the opinion that a text-book occupying the rank of Stellwag's should not be lacking in a description of such affections as anophthalmia, coloboma, cyclopis, microphthalmus, etc., for these are seen by the practical man as well as by the scientific investigator.

Prof. S.'s arrangement of his material under four heads—viz.: 1. Inflammations; 2. Tumors; 3. Cataract; 4. Functional Diseases—could, we think, be better treated if the different affections of the eye and its appendages were arranged in

their anatomical order. The bibliography which is appended to every chapter, the list of authorities quoted, and the very exhaustive index of subjects treated of will help us to overcome some of the difficulties which this arrangement gives rise to.

The fullness of the different parts leave but little room for criticism. The section on inflammatory diseases is very exhaustive and lucid, while the chapter on the inflammations of the optic nerve is simply masterly. In this chapter Stellwag agrees with Dr. Annuske, who, in the last number of Von Graefe's Archive, in speaking of optic neuritis in cerebral tumors, says that optic neuritis is almost unexceptionally a positive symptom of cerebral neoplasms, and is consequently of greater diagnostic importance than was formerly supposed, for its early appearance, in the absence of other symptoms, enables us to make a diagnosis.

The section on tumors is as full as may be, and is particularly valuable owing to the fact that it is based on Virchow's classification as enunciated in his great work on Tumors.

The discussion of functional diseases is very lucid and concise, and is to be recommended to those who desire to acquaint themselves with the theories of accommodation and refraction without entering into the elaborate details of Donders's classical treatise.

It is characteristic of Stellwag that he does not attempt to discuss such subjects which are not as yet positively determined; as, for instance, his obstinate silence about the hypodermic use of strychnia in amaurotic and amblyopic affections.

The subject of cataract, which forms one of the sections of the work, is discussed in all its bearings, but is to our mind the most unsatisfactory portion of the book. Stellwag yields to his innate modesty and fairness in giving all the views advanced on the subject, and with his desire to omit nothing tends rather to confuse than to convince.

We regret that S. is still influenced by his personal dislike to Von Graefe, and does not give his unhesitating indorsement to the modified peripheric linear extraction. He states, however, that Reuss and Woinder have found that there is less astigmatism after the peripheric than after the old flap extraction. He condemns both couching and the suction method, and considers the latter as "merely the linear extraction with artificial hinderances."

The work is well gotten up, the illustrations being better than usual, though the same can not be said of the chromolithographs, which do not bear comparison with those found in the German edition. The text is clear and neat, and altogether the book is as handsome a specimen of domestic handiwork as can easily be found.

Thanks are due to the able editors, who have shown a patience and skill in translation which is not often found.

R. C. B.

A Dictionary of Medical Science. By ROBLEY DUNGLISON, M.D., LL.D., etc.

This is a new edition of the most popular medical lexicon in the English language, enlarged and revised by the son of the lamented author, Dr. Richard J. Dunglison. The reputation which the dictionary has enjoyed for forty years, at home and abroad, will be fully sustained and even enhanced by the present edition of the work. It is fortunate for the medical profession of our country that the son has inherited the qualities of mind which fitted the father in so eminent a degree for the work of a lexicographer. Old Scaliger is said very devoutly to have thanked the Giver of all our Mercies, whenever lexicographers were mentioned, "that of his infinite goodness he had endowed some men with the spirit of dictionary-making." The old critic could not believe it possible

that any man would choose so tedious and tiresome an office "who had not a mind peculiarly formed by Heaven for collecting words and measuring syllables, and that had not by a special decree been ordained of old to this condemnation." The Dunglisons belong to that category, and the fate of Dunglison's Dictionary is secure. In the hands of the son it will be kept up to the full measure of excellence which has left it for nearly half a century almost without a rival. It is safe to say that it will be found on the table of every American physician.

Clinic of the Month.

MODIFICATIONS OF NÉLATON'S CATHETER. — Dr. George Cowan, of Danville, Ky., describes, in the *American Journal of Medical Sciences*, two modifications of the rubber catheter, both of which possess certain advantages in particular cases. In the single case in which Dr. C. had occasion to use them they enabled him to reach the bladder when no other instrument could be passed. It is to be hoped that some of our surgical cutlers will prepare the catheters as modified by Dr. C., and thus save such persons as may have occasion to use them the troubles now connected with their preparation. Meantime we make the following abstract from Dr. C.'s paper:

"I fit snugly inside of them a closely-wound spiral coil of wire, having three or four turns of it sufficiently far apart opposite to the eyelet to allow the easy flow of the urine and mucus. A closely-twisted spiral coil was made of hard brass wire, No. 24 (Wilkinson's gauge), around a stiff steel wire, about No. 15 in size; and the spiral with the steel wire upon which it had been turned were together gently, and by a twisting and pushing movement, introduced into a No. 18 Nélaton catheter (which it fitted snugly) until the spiral pressed firmly against the closed extremity of the catheter, the spiral being closed at that end to enable the steel wire to push it along. The spiral having thus been introduced entirely within the catheter, a stiff metallic tube of suitable caliber and length is passed along the straight steel-wire stylet as a guide, and pressed tightly down upon the end of the spiral, while the catheter is made to glide in an opposite

direction over the spiral by a gently kneading pressure, like that made in sliding the fingers into a new kid glove. The object of this is to close the turns of the spiral upon each other, which, having been more or less opened throughout the entire length of the coil by the stretching received by the spiral in its introduction, are still retained in a stretched-open condition by the closely-embracing contraction of the catheter. It is very necessary that all the turns of the spiral should be compact and close against each other throughout its entire length, otherwise that elasticity and power of transmitting accurately a propelling force which is peculiar to the spiral curve is in a great measure lost.

"The first introduction of the catheter thus prepared tested fully the theory, the patient being entirely unconscious of its passage into the bladder until informed of the fact. It was then put into the hands of the patient's nurse, who used it ever thereafter with similar success. It is obvious that any degree of stiffness may be obtained by simply using wire varying in size or hardness of material. It is also probable that the combination of the spiral coil with the soft gum catheter could be better effected by molding the gum around the spiral at the manufactory. Further, the brass wire in warm weather should be superseded by a less corrosive material. Steel wire, nickel-plated, if it did not lose its elasticity by being plated, and the plating did not crack in twisting the spiral, would probably answer a better purpose. German silver and possibly platinum would each also serve a better purpose than brass."

The second modification, which also seems to be an improvement, is as follows:

"I procured two pieces of watch-spring—one No. 14 in width and the other No. 10, by Dennison's watch-spring gauge—of equal lengths, and both somewhat longer than the catheter. On one, the longest, was soldered, by means of a slit in its narrowest end, a small pear-shaped brass head.

The other spring, which was the narrowest one, and also about two inches shorter, was firmly riveted and soldered to the longer one, at a point about two inches from its probe-pointed extremity, so as to lie flat upon it and re-enforce it. The springs thus attached to each other were given, by bending, an overbent prostatic curve of such a degree and length as would insure the carrying of the beak of the catheter, into which it was to be inserted, gently but firmly elevated against the upper surface of the urethral canal throughout its course.

“The introduction of such an instrument into the urethra requires, of course, a good deal of unfolding and straightening of the prostatic curve in the hands in passing it through the straight portion of the urethra. After it has been inserted an inch or two within the meatus, the penis must be gently grasped in the left hand and carried over into the fold of the groin, while with the right hand the instrument is glided along the urethra, and the closing of the prostatic end resisted by bending the straight end somewhat in an opposite curve to the prostatic end. As soon as the sinus of the bulb is reached the instrument is carried over to the median line, the penis held nearly perpendicular to the body, and the instrument pushed on into the bladder. The catheter is now held firmly in one hand while the external end of the stylet is depressed somewhat between the thighs and withdrawn.”

HAY FEVER.—Thomas C. Hoover, M. D., of Bellair, Ohio, writes to the *American Journal of Medical Science*:

“Miss M. E., who had been suffering from recurring attacks of catarrhus æstivus for eleven years, consulted me as to what means she should try for relief. The disease had uniformly recurred on the 18th of August, and had a mean duration of six weeks. At the time I first saw her she was in a paroxysm of sneezing, which she said had lasted for several hours. At times she suffered from distressing dyspnœa. She had also

a slight cough; general health excellent. Made a solution as follows: Potassæ chloratis, gr. xx; morphia sulphatis, gr. iv; aquæ distillat., fl. ʒ ij. M.: and used it by means of Holmes's perfumer, a form of atomizer, it being the most convenient. The relief was instantaneous. The same application was continued. The patient slept well, and was apparently entirely relieved until the fifth day. The sneezing returned. I then ordered her to use through the same instrument the following: Potassii bromid., ʒ j; aquæ, fl. ʒ ij. M. The paroxysm was interrupted as in the first instance. I ordered her to use these solutions alternately, using from six to ten inhalations three times daily, or equal to about one fourth of a drachm of the mixture. She continued to improve under this treatment, and without another return of dyspnœa or sneezing, until the 15th of September, when she discarded the use of the spray, being entirely well.

"J. D., a married man, aged about twenty-five years, who had been a sufferer from the same disease for six years past, came to my office, on the 26th of August, in the midst of a violent paroxysm of dyspnœa and coughing. He complained of a sensation of weight over the region of the bifurcation of the trachea, and a smarting sensation there when he coughed. Having the first solution on the table, I directed him how to use it. The relief was the same as in the first case. Ordered him to continue the use of the spray. Saw him about the 12th of September. He had discontinued the inhalation, having been entirely free from any symptoms of the disease after the first week he had used my treatment.

"Two other cases which came under my care were treated in the same way and with the same success."

TREATMENT OF VASCULAR NÆVI WITH THE GALVANIC CAUTERY.—It may be remembered that we made for this journal an abstract of Dr. Dawson's paper, published in 1871, on the actual cautery in vascular nævi. In the May number of the

American Journal of Obstetrics and Diseases of Women and Children Dr. D., in another communication on the subject, states that subsequent experience has but confirmed the views then expressed of the advantages and results of this treatment. He reports in detail a number of cases, and says:

“During the last two years, however, I have had opportunities of witnessing the use of, as well as using myself, the galvanic cautery in many operations in which it is *par excellence* the best means at the command of the surgeon. Having the requisite apparatus, I have used it many times for the destruction of *nævi*—in some of which other methods, excepting the actual cautery, had proved unsatisfactory—with unfailing success and most gratifying results.

“As many surgeons still seem undecided as to the best means for removing this not uncommon congenital disease, many still adhering to the oldest and most unsatisfactory methods, I deem it not inadvisable to add my testimony in favor of a method that so high an authority as Dr. Maas, of Breslau,* pronounces to be followed by the best results, and to be much safer than the injection of iron or other coagulating fluid. This opinion he arrived at after having used the galvanic cautery in 112 cases with the following results: *Capillary nævus*—cured, 32; improved, 1. *Cavernous or venous nævus*—cured, 72; improved, 8; died, 3. *Arterial or racemose nævus*—cured, 2; improved, 1. *Nævus combined with other tumors*—cured, 6; improved, 1; result unknown, 2.

“The galvanic cautery differs from the actual cautery in the means and facility for heating the needles, while it is superior to the latter from the fact that the degree and duration of the heat is wholly under control of the operator, and consequently it admits of being used with greater care and deliberation, while the actual-cautery needles, readily parting with their heat, necessitates their hurried use. These advantages, combined with the admissibility of using very

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fine needles,† are the only advantages the galvanic can claim over the actual, for the effects of the two methods are precisely similar—destruction of the diseased parts by heat. Both methods have the advantage of allowing the destruction of nævi in parts of the body where it would be either unsafe or impossible to apply other means, as was the case in the third of the following cases which I have selected out of eight as best illustrating the advantages claimed for the galvanic cautery.”

THE HYPODERMIC USE OF ERGOTINE.—Prof. Hildebrandt, of Königsberg, Prussia, thus writes to Dr. Munde, of the American Journal of Obstetrics and Diseases of Women and Children, concerning this subject:

“I still see as much benefit from the method as formerly, and do not intend to relinquish it. The patients frequently complain of severe pain, and some are compelled to retire to their beds an hour after the injection, and rest for an hour or two. In a number of other women I made the injections in my office, and they regularly went home *on foot* without any difficulty.

“Abscesses I have never seen, and during the past few years I have made personally several hundred injections of a full Pravaz’s (hypodermic) syringe. I know, however, that my colleagues here have met with them several times, but I also know with equal certainty that the canula in such cases was generally introduced too superficially. In two cases only in my clinic the sensitiveness of the skin was so great that in one patient after the tenth, and in the other after the twelfth, injection, which were made by my assistant, cutaneous abscesses arose.

“In performing the injection I take up a firm fold of skin and insert the canula of the syringe perpendicularly (not

† The needles used are made of fine platinum wire, doubled like a hair-pin, and then pinched tightly together. They need not be longer than an inch.

obliquely) into the crest of the fold to the depth of one half the length of the canula, in order that the fluid may always enter the thick, adipose, subcutaneous cellular tissue. I believe that it is owing to this circumstance alone that I have never had occasion to see an abscess. As a rule, only the first three to five injections are painful; subsequently they are more and more easily borne. A slight subcutaneous infiltration (Hautknoten) always remains, in some women only several days, in others many days and even weeks."

Dr. H. promises to follow the above in a few weeks by a more detailed article.

EARLY SIGNS OF URETHRAL STRICTURE.—Dr. Fessenden N. Otis, in a paper recently read before the New York Medical Journal Association and published by our able contemporary, the New York Medical Journal, thus speaks of certain matters connected with the urethra and its strictures:

"*Chronic urethral discharge*, commonly called gleet, is the signal which nature hangs out to notify the intelligent surgeon that an obstruction to the normal working of the muscular apparatus of the urethra has occurred; that plastic material, laid down in the antecedent inflammatory condition, has begun to contract the normal urethral caliber, whether it be twenty or forty millimetres in circumference, and that nothing short of a complete restoration of the normal caliber of the canal will afford a permanent cure. Sandal-oil may stop it for a time; injections of innumerable variety may, any one of them, temporarily remove it; but a little vinous or venereal excess will reproduce it, and thus the case goes on until finally an attack of *retention of urine* calls attention to the fact that the patient has strictured urethra.

"*To prevent the return of stricture after operation*, the stricture must first have been thoroughly sundered at some point; that those strictures which have been *permanently cured* (and in this number I do not include those facetiously termed

cured where the patient is obliged to use or have used a sound every two weeks for the balance of his life, but those that never re-appear after operation) have been so sundered, either by rupture through dilatation more or less rapid, by divulsion, or division. The reason why the treatment of stricture after the usual methods is imperfect—that there is always a tendency of the stricture to return—arises from the fact that, as in the case cited, the strictures were not *completely sundered* at any point—that they were *distended*, not *completely divided*. All urethral strictures are composed of elastic tissue, and any operative procedure that falls short of *complete* division of the constricting band *can never produce more than temporary results*. As long as No. 8 of the English and No. 21 of the French scales are accepted as representing the *normal* caliber of the human male urethra, and as long as *curative* treatment ceases when this caliber has been reached, there will never be *radical, permanent cure of urethral stricture*. Sooner or later, however, it is certain to be accepted that urethræ vary in size in different individuals just as widely as any other constituent portions of the human body, and that consequently stricture of the urethra is a *relative term*; that while No. 8 bougie English or No. 21 French will determine the presence or absence of stricture in the urethra of corresponding caliber, it fails to recognize stricture in urethræ of larger size, and which has been positively demonstrated in certain cases to reach as high as thirty-six or even forty millimetres in circumference; and that *complete* division of stricture, *of whatever caliber*, having been accomplished, *re-contraction may be prevented*, and that thus strictured urethræ can by appropriate treatment be with certainty restored to their normal dimensions without fear of subsequent recontraction. This I do not assert unadvisedly or rashly, as the records of more than fifty cases occurring in my own experience will demonstrate. Several of these cases, in which five and six strictures were present two years ago, and then

thoroughly divided, have been carefully examined by me within the last month, and can be shown to-day free from the *slightest evidence of recontraction*. This goes far to prove that complete division of stricture, with appropriate after-treatment, will give complete immunity from recontraction. The results of operations with the *dilating* urethrotome, presented by me to the profession at a meeting of the New York Medical Journal Association more than a year ago, have remained permanent; that is to say, *that the strictures operated on, having been thoroughly divided, were afterward completely absorbed.*"

Stricture completely curable.—Dr. Otis wishes to be distinctly understood as claiming that "stricture, as ordinarily met with, is *absolutely within the reach of curative measures*; that if completely divided, and this division maintained by suitable means until healing of the parts has occurred, no *recontraction* can ever take place; that dilatation, temporary or permanent, is *never more than a palliative measure*, unless carried to a point sufficient to *completely rupture the stricture*; that the division of stricture is not more hazardous, to say the least, than permanent dilatation—that is, by introduction of dilating instruments, which are required to remain *in situ* for hours or days—or than rapid dilatation, which requires instruments of increasing sizes to be introduced at one sitting; and, I may venture to say, scarcely more likely to produce trouble than temporary or transient dilatation, as usually practiced by surgeons, which is simply to pass a sound or bougie gently through the urethra, and to be immediately withdrawn; the same to be re-introduced, at intervals of two or three days or weeks, for the rest of the natural life of the unfortunate patient."

Dr. O. then concludes with the following: "1. Stricture may be present before difficulty in urinating occurs. 2. It is always present when *gleet* is present—*gleet, as a rule, means stricture*. 3. Dilatation of strictures is, at best, but a

temporary expedient; valuable in close stricture, where urination is interfered with, and the stricture is too close for the introduction of instruments for completely dividing it; but dilatation is not only without permanent value except in such cases, but *it is pernicious*, inasmuch as, while it is never curative, it takes the place of curative measures. 4. Nothing short of complete division of strictures can ever result in radical cure."

OBSERVATIONS ON HARE-LIP.—Sir William Fergusson, in a recent lecture on hare-lip (*British Medical Journal*), states that his favorite date for performing the operation is from three weeks to three months after birth, provided always that the child be in good health. "I have a strong impression, from my experience, that the older a patient is the more is the effect of the operation perceptible on the constitution, bodily and mentally; and I am equally convinced that if it be performed at an age when there can be no subsequent recollection of the circumstance, so much the better for all parties."

Sir William F. is of the opinion that projection of the intermaxillary bone, besides frequently the cause of much annoyance to the surgeon, is often the direct cause of failure in operations.

"In the case of double hare-lip, with double cleft in the alveolar ridge, there may be great projection or little or none. In the latter case, particularly if the columna and lateral portions of the lip be of good size, there may be no need for meddling with the intermaxillary mass. If, however, the projection be considerable, or what may be called great, and if the columna and side portions of lip be scanty, there ought then, in my opinion, to be no hesitation about taking away the projection at its junction with the vomer. The attempt to push this part back by gradual pressure is troublesome, or well-nigh impossible, in most instances, even if, as has been proposed, its narrow neck be broken. In either instance—

it has never been told from experience in what direction—the teeth come in the part thus displaced. In either or both instances I have no doubt in my own mind that the teeth, if they came at all, would so slope backward as to be of no value either for show or for use. There is, however, indubitable proof that without thus meddling with the part there are only two incisors of respectable size after all, and these are of such indifferent quality that they had better have been dispensed with at the earliest date. I therefore never hesitate to remove the intermaxillary mass when it seems the least in the way of a satisfactory operation. The advantages of doing so seem to me greatly to preponderate, and if there be cleft hard palate at the same time, there is far greater chance in after-years of the gap becoming narrower, while in adult life there will be greater facility for the assistance of the dentist. But, I imagine, there is less hesitation or difficulty in the surgeon's mind in the case of capacious double gap than when there is only a single one with considerable projection of the intermaxillary margin. It is to such cases that the chief object of these observations is directed. If it be difficult to apply compression on the intermaxillary portion in double cleft, it is still more so when only one side projects, for its base is broader and firmer. The instances where there is no special projection are common, and require no comment, as there is then, as regards this matter, no obstacle to a satisfactory and successful operation; but when there is a projection, if considerable, it is a more serious obstacle to these results than those inexperienced may imagine. I believe that this condition is a frequent cause of failure in the ordinary operation, particularly if it be done without the truss-compressor on each cheek to push the lateral portions of the lip toward the mesial line. In such a case the surgeon is naturally anxious to leave the alveolar ridge untouched; and in accordance with a common practice, when it is desirable to secure union by first intention, when the stitches or needles

are withdrawn, strips of plaster are carried from cheek to cheek to hold the union firm. Scarcely a greater mistake can be made, for the line of union in the lip being generally under such circumstances exactly over or opposite to the sharp angle of the projection of bone, the young cicatrix is pressed against it, and gradually thins away until it is fairly split open, when the operation proves a failure. This, I have a strong impression, is an explanation of the failure of many cases that do not seem in any special way complicated. I do not mean that straps always conduce to this effect, and that therefore they should never be used. On the contrary, I have very frequently seen them of much service. But, if the single projection alluded to be conspicuous—in which case there will always be a somewhat sharp, angular margin—it is, in my opinion, best to get rid of it at the time of the operation. In my own practice I was at one time in the habit of cutting the projection away with sharp small bone-forceps, dividing gum and bone at the same time, and aiming chiefly at getting rid of the projection. This usually involved all the intermaxillary bone on that side, and implied perhaps little heed of what damage might be inflicted on the sound side, although latterly I always passed the blades into the mesial line between the intermaxillary bones, so as to secure this side from material injury. In the course of my experience I fancy that I refined on this practice. I found that it was well to detach the portion as high up toward the nostril as could conveniently be reached, and here I discovered that in all young subjects there was only cartilage to be divided. This could easily be done with the knife or scissors, and so for many years I have used only one or other of these instruments. Usually I have passed the scalpel through the mucous membrane, under the frænum, up between the bones, and divided the cartilage, periosteum, and gum to sever the part; and thus the use of cutting with the bone-forceps has been dispensed with; for, to say the least, such an instrument

is coarse-like and clumsy in an operation for hare-lip on an infant only a few weeks old.

"While I can offer little objection to this proceeding, I fancy that I have recently fallen on one equally efficacious, and void of certain objections which, I think, might be urged against it. Instead of this sweeping wholesale abstraction, I content myself with making an incision—vertical, sloping, or horizontal—with a scalpel through the mucous membrane and periosteum over the projecting piece of bone. With a few touches with a knife, or a little squeeze with finger and thumb, I so separate these tissues as to permit the entrance of a gouge of a quarter or three eighths of an inch in breadth, with which I scoop out the body of the milk incisor-tooth in as far as it is formed, taking no heed of the cyst or of that of the permanent one, and even cut out such wall of bone as may be there; usually, at four or eight weeks, only small plates of bone. In this way the hard projection is removed, and the tissues that remain offer no obstruction to the union of the junction of the lip in front, while the operation, as it appears to me, is less destructive, therefore more conservative, in character. There is thus left only the mucous membrane, with possibly some periosteum, which forms a soft cushion behind the wound in the lip, and so the remaining intermaxillary bone is not divested of covering so thoroughly as when cutting-instruments are passed in the mesial line to take all away on the offending side."

HYDRATE OF CHLORAL IN THE TREATMENT OF PERTUSSIS. Dr. Jas. Bordley, of Centreville, Ohio, thus speaks of chloral hydrate in whooping-cough: The dose, of course, must be regulated by the age of the patient and the severity of the attack, and care always taken to observe the peculiar susceptibility in each individual case; as some children are much more susceptible to its action than others, as much so as is the case with opium and its preparations. He commences

with a half grain for a child one year old, and increases half a grain for each additional year, and repeats every three or four hours. After noting the effect of that dose, he increases it from a half to one grain each day, according to the severity of the attack and the peculiar tolerance of the medicine. Yet in some cases this plan may be deviated from with benefit, and the increase may be much greater and more rapid, but in the majority of cases he has found the above plan satisfactory. Watch the effect of the article, and when decided symptoms of hypnosis are manifested suspend its use until the subsidence of such symptoms, then begin it again in diminished quantity, to be increased as before. He has found the "compound syrup of sarsaparilla" a good vehicle for its administration, as it masks the taste and destroys the pungency of the chloral more effectually than any thing else he has tried.

CARBUNCLE TREATED BY CARBOLIC ACID.—Dr. Peter Eade writes, in the *London Lancet*, that he has found the action of carbolic acid in carbuncle constantly beneficial. He uses one part of acid to four or five of oil or glycerine. He thinks the efficacy of the solution is limited almost absolutely to those parts with which it could be brought into actual contact; and, although it appears occasionally to have produced injurious effects when used in large quantity, he has kept a large sloughing and granulating surface, for days together, constantly covered with the carbolized oil without any harm arising, although the urine soon presented the peculiar blackish color which has been several times observed during its employment.

Notes and Queries.

THE MEDICAL LITERATURE OF KENTUCKY.—The following is an extract from a Report on the Medical Literature of Kentucky, by Dr. L. P. Yandell, which will be published in the forthcoming volume of Transactions of the State Medical Society:

“I have undertaken, in compliance with the wishes of the Medical Society of Kentucky, to write a history of the Medical Literature of the State, and have the honor to submit the following report as the result of my labors. The report embraces a period of seventy-five years, and refers to the productions of more than two hundred Kentucky physicians who have written on medicine. It is consequently long, and, if deemed by the society worthy of publication, must extend through at least two volumes of its Transactions. In preparing it two plans occurred to my mind; one to present a continuous history of the various publications as they appeared; the other to take up the several authors in the order of their appearance, and then, having introduced them, to follow each down to the present time or to the close of his career. The latter has been adopted as having upon the whole most advantages, and this notably among others, that with every author named in the report will be seen at a single view a list of all his writings.

“The report, besides notices of the medical literature of Kentucky, embraces some account of the origin of her medical schools, with biographical sketches of a number of her more distinguished medical men. In collecting the materials for it my chief reliance has been upon the medical journals

of our country, and all these have been examined in which it was thought any thing was likely to be found from the pens of Kentucky physicians. The transactions of our society from the beginning and those of the American Medical Association have also been consulted. I have sought in addition to gather up all the introductory lectures delivered in our medical schools, and all the more ephemeral publications not contained in the journals of medicine. The reports of our hospitals, lunatic asylums, institutions for the blind and for deaf-mutes have also been referred to. The larger and more elaborate works on medicine have received due attention, and in addition to all I have had recourse to other than medical books for some facts that bear upon the history of Kentucky medicine. But with all my efforts to make the report complete I can hardly hope that many omissions will not be found in it which more time and greater care might have prevented; and still less reason have I to expect that my readers, however courteous, will concur in all the judgments expressed concerning our medical writers and their works. On the latter point I claim only to have formed these judgments candidly, and without any feeling of which I am conscious that would tempt me to do injustice to any one. Almost all that relates to the medical schools of Kentucky I have written from my own recollection, and venture to hope that my account of them will be found free from prejudice. Whatever were the controversies in which I bore a part while connected with those institutions, the time since has been sufficient to allay all the animosities they enkindled.

“On an impartial review of the labors of Kentucky physicians and surgeons, and a candid comparison of her medical literature with that of her sister states, I believe it will be admitted that a work has been performed by her medical profession of which she may well feel proud. Her great physicians and surgeons lose nothing by comparison with the statesmen, orators, and soldiers who have conferred luster

upon her name. A near neighbor to the Sage of Ashland, his medical counselor and intimate friend, lived the most successful lithotomist of his times. With the hero of Buena Vista grew up to manhood in the backwoods of Kentucky another surgeon, to whose boldness and skill the world is indebted for ovariectomy, an operation which has already added years to the average duration of life in women. The most original and elaborate treatise on medicine by an American physician is from the pen of a writer who was reared in Kentucky, and while engaged in its preparation was a teacher in one of her medical schools. One of the most comprehensive systems of surgery in our language was written by a former teacher in the same school; and the work on practice, which stands at the head of American medical books, is made up in part of materials collected by the author while a teacher of medicine in Kentucky.

"Among those who were first attracted by curiosity or by a spirit of adventure to the wilds of Kentucky were two physicians whose names have come down to us. Dr. Walker visited the eastern borders of the state as early as 1747, a good many years in advance of Daniel Boone, and Dr. Connolly came out in 1770, only a year after the great pioneer. Connolly was one of the company which laid out the plat of the city of Louisville in 1773, a year before the first log-cabin was reared by a white man in the state. These hardy adventurers came and saw the glories of our primeval forests and our fertile lands, but left behind them no history of their observations or adventures; and but little further is known of them than that Connolly became a tory on the breaking out of our Revolutionary War; after having shared in the confidence of Washington was captured with dispatches on his person hostile to the colonies, and confined many years in prison.

"The medical literature of Kentucky dates back a few months beyond the beginning of the present century. It

is an interesting fact that the idea of originating a medical school in Kentucky is as old as her literature. As early as 1799 the Medical Department of Transylvania University was partially organized, and Dr. Samuel Brown was elected to the chair of Theory and Practice of Medicine and Chemistry. About the same time Dr. Frederick Ridgely, who had distinguished himself as a surgeon in the Revolutionary army, delivered a course of lectures in the University to a small class of medical students. To this dignified and worthy pioneer of the profession therefore belongs the honor of having inaugurated the public teaching of medicine in Kentucky. Dr. Ridgely was a pupil and afterward a correspondent of Dr. Rush, and in all the moral elements that go to form a good physician, as well as in general scholarship and medical learning, he was a worthy pupil of his illustrious teacher.

“No one who only for a moment turns his mind to the medical literature of Kentucky can fail to remark how great an influence has been exerted over it from the beginning by her medical schools. It originated with Dr. Samuel Brown, who was also first to receive an appointment in the earliest organized school. The medical journals, which have done so much to stimulate professional writing, have been chiefly sustained by our schools of medicine.

“About the time that Dr. Brown was made a professor in Transylvania University he became a writer for the medical press. The first medical paper from the pen of a Kentucky physician that I have been able to trace is one written by him for the *American Medical Repository*, at that time, I believe, the only journal of medicine published in the United States. It bears date June, 1799, and is contained in the fourth volume of that journal. In the same volume is the report of a case by Dr. Brown, dated November, 1800, together with a second one of a later date; and these are followed, in subsequent numbers, by other medical histories,

which as possessing an inherent interest, as well as being matters of curiosity at this day, I shall notice in detail.

“Dr. Brown, the father of our medical literature, was in every respect a remarkable man. In person he was much above the ordinary size of men, as well as pleasing and commanding. He was of a noble aspect, and his manners were in keeping with his presence. Highly gifted by nature, his fine parts were set off by all the advantages of education. A scholar, with a quick, observant mind, enlarged and polished by intercourse with the world; witty, fluent in speech, full of general knowledge and anecdote gathered from extensive travel, he was fitted to shine as a lecturer; and if necessity or taste had turned his attention seriously to the practice of medicine, as a physician he might have attained to the highest rank. But with all his powers and varied accomplishments he was not a successful teacher, nor for many years did he take any serious part in the practice of medicine. His mind was a discursive one, and he could not brook the drudgery of his profession. He was a desultory rather than a severe student, and was always captivated by novelty, at the same time his strong common-sense saved him from the wild philosophy which pervaded some of the schools of medicine in his day.

“Dr. Brown was a native of Virginia, and on his mother’s side was descended from John Preston, of the Blue Ridge, to whom so many gifted men of the South trace their lineage. He was sent to Edinburgh to complete his medical education, and heard the lectures of Monroe, Bell, and Black, where sat beside him fellow-students from America; Hosack, of New York, and Davidge, of Baltimore, and McDowell, of Kentucky. He was wont to relate to his classes in Lexington that three of the young Americans resolved among themselves to become teachers of medicine on their return home. The idea, he told us, seemed preposterous to the students of the old country, and the Americans were not a little ridiculed for their lofty designs. ‘But,’ he continued,

‘we were not to be laughed out of our projects, and in a little while after his return Hosack was announced a professor in his native city, and Davidge was at work laying the foundations of the University of Maryland. I was appointed a professor in this young university, but the chair proved to be a barren scepter in my hand. After many years a new organization was effected, in which my name did not appear. But the enterprise failed; the professors disagreed, got into controversies, aspersed one another in acrimonious pamphlets, and the faculty was broken up. A new attempt was made, and my long-cherished vision was at last realized. I found myself, after so long a time, in a flourishing medical school.’

“But as he adhered long to no system of medicine, so he soon grew tired of the business of teaching, and in five years relinquished the place in the school for which he had waited so long. Dr. Caldwell, the most scholarly of his colleagues, on account of this readiness to embrace new theories and systems, pursue them eagerly for a little while and then abandon them for something newer, was in the habit of comparing him to ‘a cur-dog hunting rabbits.’ He certainly was wedded to no doctrine in medicine. Of none could he ever have said, with the great Hunter, that ‘he would never give them up till he gave up the ghost.’ His anecdotes, which he told in the happiest manner, formed the most attractive feature of his lectures, or at least the parts which I find clinging most tenaciously to my memory. One in particular I remember, related in his valedictory address to his class in 1824. ‘I knew a professor in Edinburgh,’ he said, ‘who from repeated dislocations of his lower jaw was liable to that accident every time he yawned. On account of his infirmity it became necessary to take with him constantly a servant who had learned the art of reducing the dislocation. His students soon came to understand the case, and when at any time the professor grew tedious, they had only to set up a general yawning to excite the same movement in him; whereupon, before he

thought of it, his jaw would fly out of place, and while his servant was at work setting it they would hurry out of his room, pretending to think the lecture was over. No doubt, gentlemen,' he continued, with a pathos that affected the most thoughtless of his pupils, 'you would have been glad many a time this winter if you could have exerted the same control over my jaw.'

"Like nearly all great men, Dr. Brown was natural in manner and simple in his tastes, as far as possible removed from that pedantry and pomposity that at one time seemed characteristic of medical men. The following incident is illustrative of this pleasing trait in his character. He had been called to see a sick child in consultation with a leading practitioner of Lexington, and among the measures agreed upon was a warm foot-bath. Returning to the chamber of the little patient, the physician in attendance proceeded to give directions to the mother in terms somewhat like these: 'You will immerse the lower extremities of your infant in tepid water, madam, and subsequently use friction freely with a napkin.' The mother was lost in the succession of long words, and raised her eyes in bewilderment. Dr. Brown saw her embarrassment, and hastened to relieve her by saying, 'Bathe your child's feet and legs in warm water, my good woman, and wipe them dry with a towel.'

"The crowning labor of Dr. Brown's life, from which he expected the happiest results, was the formation of a society designed to promote harmony among the members of the profession. He styled it the *Kappa Lambda Association*. It included among its members many of the most eminent physicians in our country. Dr. Brown was its president, and it was his purpose to devote the evening of his days to visiting the branch societies in the towns and cities of the Union, thus cultivating the social relations of physicians. He resigned his chair in 1825, and died, near Huntsville, Ala., on the 12th of January, 1830.

“Dr. Daniel Drake succeeded to the chair of Theory and Practice in the University. He had been connected with the efforts, in 1817, to form a medical school in Lexington. His associates were Drs. Dudley, Richardson, Overton, and Blythe. The enterprise failed, and the faculty was disorganized at the close of the first session; Overton returning to Nashville a good deal disgusted with medical schools, and Drake returning to Cincinnati to establish one in that city. The feuds that led to the disruption resulted in a bitter personal controversy, which was carried on for a time in pamphlets, and ended in a duel between Dudley and Richardson. Drake was already an author before his first connection with the University, and as such was known beyond the bounds of his own country. His ‘Picture of Cincinnati’ had given him a reputation among scientific men in Europe. With the circular letter announcing the reorganization of the Lexington school came from him to us in Tennessee a prospectus of the Ohio Medical College, setting forth its claims to public patronage. With his indomitable will and perseverance he had procured a charter for a school of medicine in Cincinnati. The gifted anatomist, Godman, was associated with him; but he was doomed to a second disappointment, for Godman, after a year or two, became discouraged and resigned his professorship. Two other colleagues became refractory and conspired against him. In his charter he had unwisely placed the governing power of the college in the hands of the professors, and when dissensions arose in the faculty there was no umpire to settle them. Having the appointing power, they claimed also the right to expel an obnoxious member. Dr. Drake was president of the faculty, and would at any time after the first year or two have cheerfully accepted the resignation of his colleagues, but being in the minority he could not compel them to resign. After Godman gave up his place but three professors remained—Jesse Smith, Elijah Slack, and Drake. Things went on from bad to worse, until the majority made

up their minds to get rid of the difficulties by expelling the president. A meeting of the faculty was accordingly called. The president had no right to decline taking part in it, and at the appointed hour appeared in his seat. A motion was made by Prof. Smith that Prof. Drake be expelled from his chair in the Ohio Medical College. It was duly seconded by Prof. Slack, and the president put it to vote. There were two votes in the affirmative, and the chair having no right to vote except in case of a tie, the president announced that 'Professor Drake was unanimously expelled from the Ohio Medical College;' and Dr. Slack, taking up the only candle in the room where this scene was being enacted, conducted the extruded professor down stairs.

"In October, the same year, I met Dr. Drake in Lexington, whither I had repaired to attend my first course of lectures. He had returned to Transylvania again, chastened by defeat and with powers enlarged by experience. I saw him take the oath of office administered to the professors in the University, and heard his Latin oration when inducted into office. For colleagues he had Caldwell, Brown, Dudley, Richardson, and Blythe. I know that large deductions must be made for first impressions on an ardent youthful mind. Much of the enthusiasm excited by new men and strange scenes, I am aware, is to be set down to the charm of novelty; but my conviction is still strong, after the lapse of these fifty years, that I have never seen in any medical school a more splendid combination of talent than adorned Transylvania University at that day. Caldwell, in all the personal and intellectual qualities that strike the eye and the ear in a lecturer, has rarely been equaled by a teacher of medicine. Though already advanced in years, he retained all the fire and vigor of early manhood. His spirits were buoyant and his temper sanguine, and whether on the rostrum or in his study, his air was that of a man who was doing his best. During the winter Drake engaged him in a debate on the question of

spontaneous generation. He affirmed the truth of the doctrine, and adduced many facts to prove that acorns might be developed in the earth and fish in mill-ponds. Drake overwhelmed him by authorities to the contrary, and out of a class numbering two hundred carried nearly every student with him.

“Dr. Drake was in the habit of saying that ‘he had resigned more professorships and been oftener expelled than any medical teacher in the United States.’ His appointments amounted to not less than ten, and he was connected with five schools, two of which were of his own projecting. It is significant that from his first effort in Lexington down to his last winter in the University of Louisville, as often as he came to Kentucky he found relief from pecuniary pressure, and with this also comparative peace and tranquillity of mind; and that as often as he returned to his loved Cincinnati it was only to encounter jealousy and failure.”

GUN-SHOT WOUND.—Dr. W. P. White, of Louisville, Ky., communicates the following case: “Was called, on the 23d of last October, to see Mr. Mc. a few minutes after his having been shot by a Smith & Wesson pistol. The ball passed through the tragus of the left ear, behind the zygomatic fossa and ramus of the left inferior maxillary bone, passing across so as to strike the posterior alveolar processes of the right superior maxillary, dislodging two of the molars, and also breaking off a piece of the bone, and then was spit out. It was found badly battered. The hemorrhage, which was quite free, was arrested by compressing the temporal artery. Whisky was given, and the patient was removed to a hotel a square distant from where he was shot. In five hours reaction had fairly commenced, the bandage and compress were removed, the hemorrhage did not return, and fifteen grains of bromide of potassium were given every two hours. The bromide was used for some days at such intervals as seemed best, a laxa-

tive given when necessary, and cold-water dressing applied to the external wound. During a part of the time his pulse was 108, the skin hot and dry, and there was great somnolency. On the 30th he was removed home, two miles distant. On the 1st of November another tooth was removed, and also a portion of the alveolar process. On the 6th he was able to walk about. The wound healed up by healthy granulation, and his recovery was complete."

IMMEDIATE OPERATION FOR LACERATED PERINÆUM.—Dr. A. Given, of Louisville, Ky., gives the following narration:

"March 12th I saw Mrs. B. twenty minutes after her giving birth to a large child. Upon examination I found a complete rupture of the perinæum. Adopting the practice advised by Dr. Goodell in his article upon *Laceration of the Perinæum*, I immediately closed the rent with wire sutures; the patient's knees were fastened together, and a solution of carbolic acid introduced into the vagina twice a day. The bowels were evacuated on the seventh day—a warm-water enema being used—and on the eighth the stitches—there were but two—removed; and I found complete union, except at about one eighth of an inch of the upper angle of the rent. The result, while excellent, would have been more satisfactory had three sutures been used.

"The advantages of a primary over a secondary operation, as suggested by Dr. Goodell, are threefold:

"1. The parts, being raw and in a plastic state, readily unite when held in apposition.

"2. When the rent is immediately closed the union will usually be completed in the time allotted to women for keeping their beds in ordinary labors, thus saving time and a great deal of annoyance to the patient.

"3. The parts being in a state of anæsthesia produced by the labor, the introduction of sutures causes but little pain and inconvenience afterward; while if the case be left until

the flaps cicatrize, the denudation and introduction of the suture is a very painful operation, unless performed while under the influence of chloroform."

AMENORRHOEA FROM CONGENITAL MALFORMATION. — Dr. A. C. Haynes, of Owensboro, Kentucky, communicates the following:

"In adult women the occurrence of sexual desire is a proof of ovarian activity. Dr. Churchill says, 'I think where this desire is present there can be no doubt of the presence of at least one ovary, and of its being more or less active, even though menstruation does not take place.' But, on the other hand, absence of sexual desire is no proof of the absence of the ovaries; for such desire is not essential for conception, and some women have been quite prolific never having experienced it.

"The subjoined case illustrates the fact of the existence of sexual feeling with absence of the uterus, and shows, according to the statement of Dr. Churchill just now quoted, that at least one ovary was present.

"Mrs. —, twenty-seven years old, has been married several years, and enjoys sexual intercourse. She has never menstruated. The external organs of generation are normal, the breasts well-developed, but the vagina is only about two inches long, and the most careful and thorough examination fails to detect a uterus even in a rudimentary condition."

POISONING BY THE ROOT OF PHYTOLACCA DECANDRA. — Dr. Rawlings Young, of Corinth, Miss., writes that he was called, on the 21st inst., to three children—nine, six, and four years old—poisoned by eating the root of the *phytolacca decandra*. They ate this at 11:30 A. M., at 12 M. took a hearty dinner, and in an hour after commenced purging and vomiting. At 4:30 P. M., when he first saw them, the purging had ceased, but free vomiting occurred at intervals of twenty or thirty

minutes; great dilatation of pupils; pulse rapid and very feeble; inspiration short and sighing. When completely aroused from their narcotism they complained of intense epigastric pain, great thirst, and chilliness. The treatment consisted of hot baths, sinapisms, small doses of brandy frequently repeated; and they all recovered, though continuing to vomit until 6 A. M. the next day, and complaining of vertigo and epigastric tenderness for a day longer.

WAS IT INFLUENZA?—The following has just been received from one of the most experienced and sagacious of our medical friends:

Editors American Practitioner:

A very curious case having recently come under my observation, I beg to give you its history in order to elicit reports of similar cases, if your readers have had such, that I may put them together, and, if possible, work out the pathological condition on which they depend, and which I could not definitely determine in the following case.

Mr. B., merchant, aged fifty-three years, previously healthy, having never had other illness than two or three attacks at distant intervals of intermittent fever—the last more than a year prior to the present attack—after a short ride by rail through cold March winds, finished by a few miles on the top of a stage, felt badly, as though he had contracted a cold. He took a foot-bath and a hot punch, and retired early. Next morning arose not feeling well, but passed the day pleasantly; among other things enjoyed for a short time a fox-chase on horseback. The succeeding night returned to the city still feeling badly, and upon the following morning, the 1st of April, I saw him. He was in bed, countenance and complexion entirely natural; was cheerful; said he had sent for me, but scarcely knew why; that he had moderate appetite, had slept well the preceding night, had no cough, no sore throat; felt weak, and had a sense of constriction

across the trunk about the top of the epigastric and hypochondriac regions.

He was so cheerful and complained so little that I was very near dismissing the case without even noting the pulse; but on doing so it was so long before I felt a beat that I supposed the artery was compressed at some point. Ascertaining, however, that it was not, I found it beating but 26 to the minute. The rhythm, fullness, and force were perfectly good; respiration 24 per minute. The heart was normal in size, its sounds distinct, and impulse pointed and natural. The bowels were in good condition, and the urine sufficiently abundant, its specific gravity 1020, and betraying nothing abnormal under microscopic and chemical examination.

I directed the recumbent position to be maintained, and brandy, musk, and camphor to be given freely. At the afternoon and evening visits the condition remained unchanged. At the evening visit withdrew the stimulants, and gave five grains of quinine and one quarter grain of calomel every three hours until four doses were taken.

The morning of the second day found him in every regard about the same, except the respiration, which was 14 per minute. Drs. Lewis Rogers and Bolling saw him with me in the course of the day, and upon careful examination found heart as above reported; but prior to their visit patient had a moderately large evacuation from the bowels, induced by the calomel, and the pulse-beats had increased to 32 per minute; respiration 14. We continued two-and-a-half-grain doses of quinine every four hours, and ordered a pill of two grains of calomel and compound extract of colocynth, each to be taken at bed-time. The third day the pulse was 36. The pill had acted well; otherwise the same.

The fourth day pulse 42. We gave no medicine. The fifth day pulse 60. The sixth day it rose to 80, its natural rate. Patient then resumed work; has observed no inconvenience, and is now quite well. The temperature the first

morning was 97°; that evening it rose to 98.4°, and continued at that throughout.

I should, as remarked at the outset, be glad to see reports of similar cases, if such occur in the practice of your readers.

LOUISVILLE, May 14, 1874.

E. D. FORÉE.

OBITUARY.—At a called meeting of the Zanesville Academy of Medicine, held Saturday, May 2d, to take action in relation to the death of its late fellow, Dr. Jno. G. F. Holston, which took place at Washington, D. C., May 1, 1874, the following resolutions were adopted :

“That we, whose occupation has been to relieve human suffering, are reminded that the time must come when our places on earth shall be vacated, therefore

“Resolved, that in the death of Dr. Holston the Zanesville Academy of Medicine loses one of its prominent members and the profession at large an eminent physician and surgeon of extensive professional and literary culture, ripe experience, and accurate judgment, and society a warm-hearted, genial, and generous member, whose life has been mainly devoted to the good of his fellow-beings.

“Resolved, that we attend the obsequies of our deceased fellow in a body.

“Resolved, that we deeply sympathize with the family and relatives of the deceased.

“Resolved, that the corresponding secretary transmit a copy of these resolutions to the family, the city press, and the medical journals.

C. C. HILDRETH, *Chairman*.

“A. E. BELL, *Secretary pro tem*.”

THE McDOWELL MEDICAL SOCIETY.—In response to a call made by the Henderson Medical Club upon the physicians in the counties of Hopkins, Christian, Union, Webster, and Henderson, between thirty and forty physicians assembled in Henderson, Ky., Thursday, May 7th, for the purpose of effecting a district medical association. Such an organization *was* effected, embracing the counties above named, and called

the "McDowell Medical Society," in honor of Dr. Ephraim McDowell. The following gentlemen were elected officers for the ensuing twelve months:

President—Dr. J. B. Cook, Henderson; *First Vice-president*—Dr. W. M. Fuquay, Christian County; *Second Vice-president*—Dr. R. M. King, Hopkins County; *Third Vice-president*—Dr. O. L. Drake, Webster County; *Fourth Vice-president*—Dr. J. T. Jenkins, Union County; *Fifth Vice-president*—Dr. P. Thompson, Henderson County.

Interesting and important papers were read by Drs. J. H. Letcher, J. L. Cook, P. Thompson, S. Furman, and J. A. Hodge. The following committees were appointed:

Committee of Arrangements—Dr. J. W. Pritchelt, Madisonville, Chairman; *Committee on Medical Ethics*—Dr. J. A. Hodge, Henderson, Chairman; *Committee on Public Hygiene*—Dr. Robert Stuart, Zion, Chairman; *Committee on Epidemics*—Dr. H. S. Jones, Corydon, Chairman; *Committee on Obstetrics*—Dr. O. L. Drake, Slaughtersville, Chairman; *Committee on Improvements in Practical Medicine*—Dr. Ben. Letcher, Henderson, Chairman; *Committee on Improvements in Surgery*—Dr. P. Thompson, Henderson, Chairman; *Committee on Finance*—Dr. Thomas W. Taylor, Henderson, Chairman; *Committee on Publication*—Dr. William M. Hanna, Henderson, Chairman.

DR. ELY McCLELLAN.—Under joint resolution of Congress, approved in March last, authorizing the detail of a medical officer of the army to inquire into and report upon the causes of epidemic cholera, Ely McClellan, M. D., has been selected by the surgeon-general of the United States army to carry out the provision of the resolution. Dr. McClellan is already known to the readers of the *American Practitioner* as an earnest and intelligent laborer in this interesting field. Of the many cultivated and accomplished men under the control of Dr. Barnes, we believe he could not have designated one who would make a more conscientious and exhaustive effort to collect and develop the facts of the late epidemic than Assistant Surgeon McClellan.

